The AGRICULTURAL EDUCATION Magazine

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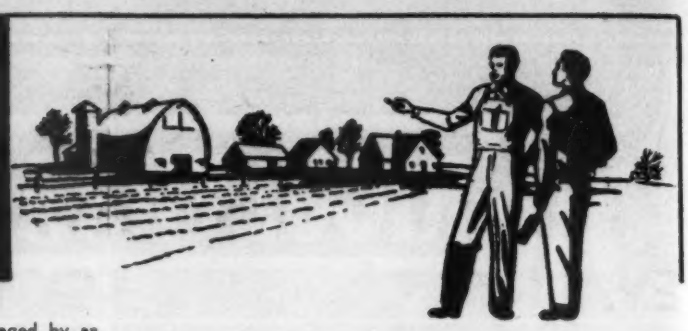
Featuring— **Evaluating Programs in Vocational Agriculture**

The Agricultural Education Magazine



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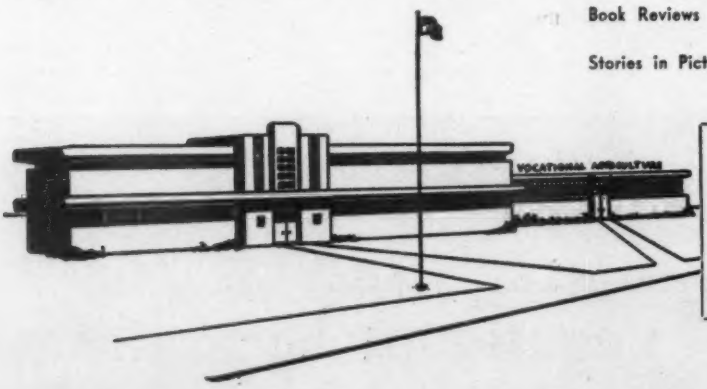

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Editorials

EVALUATION— A Movement in Education

H. S. BRUNNER, Teacher Education, Pennsylvania State University

The word "evaluation" is heard on all sides these days. Some people use it just for the satisfaction that comes with pronouncing a word that is both euphonious and fashionable. Others use it as just another term for grading or measurement. And, happily enough, the word is used more and more with its full and proper connotation of a process involving consideration of values, and the practice of judgment in the application of those values to attainment. Furthermore, the extent to which this process is being studied and employed in one form or another seems to justify looking upon it as a "movement" in education, just as we think of the "Progressive Education" movement which developed about fifteen years ago, and the "tests and measurements" movement which has had a great influence on educational practice for the last 25 years. Risking a dangerous over-simplification, it might be said that the essential and distinguishing difference of evaluation from measurement can be indicated in the two questions: "How much?" (Measurement); and, "What value?" (Evaluation).

We say we want students—and teachers—to consider problems on the basis of all available evidence, to be inquiringly analytical, to think critically. We publish social competence and citizenship among our objectives, and we profess to be developing a sense of moral responsibility.

Let us consider briefly the last named objective, moral responsibility. Study is the effort to deal intelligently with the situation at hand. Then, study of the ultimate effects of our acts is just a part of decent prudential living. One must be willing to study and learn the effects of his actions and of his life. This is the basis of moral responsibility and of all moral life. An important purpose of education, therefore, is to develop a capacity for sound moral judgments and the exercise of analytical thinking about alternatives. And inevitably involved in this is deep sensitivity—our intuitions from whence arise basic values. Out of comparison and the development of his own value judgments, each student is certain to develop a kind of commitment, an idea of "the better life" and the kind of a society in which such life will prevail. The teacher then automatically projects the assumption that it is for this kind of a society that he is preparing his students.

But to decide whether we are accomplishing such broad objectives we must determine just what is implied by the terms and the ideas involved in these objectives. The ideas must be defined in terms of observable behavior. What kind of behavior do we expect, for instance, from one who has a sense of moral responsibility? This is the thought process basic to evaluation. The procedures for carrying out this process have been defined variously, but there is more or less general agreement on three or four rather well-defined steps. First, the objectives must be formulated

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EVALUATION— Process and Product

GORDON I. SWANSON, Teacher Education, Univ. of Minnesota

Evaluation cannot be escaped. It occurs continuously in all areas of society and education seems to be a most popular arena. Editors, teachers, citizen groups, and students alike are evaluators of education in one way or another. Evaluation is both a privilege and a professional responsibility. As a privilege, it exists as one of the symptoms of a healthy democracy. As a professional responsibility it serves as an accounting for professional stewardship.

There is value in both the process and product of evaluation. Its process may be enlightening even though its product may be somewhat obscure or even tenuous. "Action research," for example, may develop as an evaluation scheme in which the process itself contains the values inherent in the activity.

More often, evaluation is directed at the product of education. *The value of an educational program derives from the changes that are produced in students.* Evaluation must ultimately assess these changes. The direction of change is frequently referred to as the aims of a program. The desired change or perhaps its terminal points are described as objectives. The consequences of change may be called outcomes. Thus the aims and objectives of an educational program may be described as expected outcomes and evaluation may proceed with these as a point of departure. Actual outcomes may, of course, vary greatly from those that are expected.

Evaluation of agricultural education in terms of expected outcomes is more than a determination of the actual outcomes and their relationship to expected outcomes. There must also be an assessment of the desirability of both the expected and actual outcomes! This cannot be determined by historical fiat nor can it be prescribed or proscribed apart from the dynamic nature of modern agriculture and its related occupations. Expected outcomes can, in fact, become obsolete and their desirability should be considered and determined before evaluation proceeds. A further analogy may be drawn from research involving status studies. In many cases a status is determined with its desirability either assumed or indeterminate. The conclusions, therefore, lack a dimension that is essential to their usefulness.

If it can be agreed that agricultural education objectives should be stated in terms of desirable changes in students, then the only acceptable evidence of effective teaching is evidence of desirable changes in students. Other evidence is tentative and tenuous in comparison with the fact of desirable change. Other factors deal only with the conditions or sets of circumstances under which learning occurs. Where then do farming programs fit into the picture? Are they conditioners of learning or are they evidence of desirable change? Indeed, farming programs are the most unique aspect of vocational agriculture and, paradoxically, they exist in an area that is least ex-

(Continued on page 245)

Farming programs are a factor

In evaluation of Vo-Ag programs

EARL H. KNEBEL, Teacher Education, Texas A & M College

Earl H. Knebel

"A strong supervised farm training program is a vital and essential part of any practical educational program of vocational agriculture. An effective supervised farm training program should include production projects, improvement projects, and supplementary farm jobs." A statement such as this is offered many times by teacher trainers in agricultural education and supervisors of vocational agriculture. Can we accept this statement as a fundamental principle? Can we present any proof that better departments as evaluated by teachers, administrators, supervisors, and interested laymen do have stronger farm training programs than these considered to be weaker departments?

Questions such as these motivated the writer of this article to undertake a research problem* which would present some concrete proof that departments can be identified with characteristics and traits that can be objectively measured. If these traits and characteristics can be identified and measured, then departments of vocational agriculture more easily can be evaluated as superior or above-average departments, or as weaker, below-average departments.

Farming Programs Defined

A production project is a productive enterprise project or ownership project which is a business venture for gaining experience and profit by a student of vocational agriculture. A production project usually covers a period of time represented by a normal production cycle of a farm enterprise. Such a project is owned in part or entirely by the student and is controlled by the student. An improvement project is an undertaking which improves the real estate value of the farm, the efficiency of the farm business or of a farm enterprise, or the living conditions of the farm family. An improvement project generally consists of a number of related activities which are planned and carried out by the student under the supervision of the teacher of vocational agriculture and with the cooperation of the student's parents. Usually the student does not have ownership of such a project, nor does he generally expect any direct cash income to be paid. Supplementary farm jobs or supplementary farm practices or skills, as they are often identified, are jobs other than those already included as normal parts of a student's production and improvement projects. These generally are undertaken by him to gain additional experience or skill or for improving the efficiency of the farm home. These jobs provide opportunities for experiences of value to the boy in addition to the other portions of his supervised farming program. Thus, they provide for needed experiences which would otherwise be lacking in his program. A supplementary farm job usually consists of a single job of limited scope, whereas an improvement project generally consists of a series of closely related jobs much broader in scope.

How the Study Was Made

This article is a presentation of some of the more pertinent findings of that part of the writer's doctoral dissertation concerned with evaluation of supervised farm training programs of fifty "above-average" departments of vocational agriculture and fifty "below-average" departments of vocational agriculture in Oklahoma. The "above-average" departments and the "below-average" departments were identified by the five district supervisors of vocational agriculture in Oklahoma. Mr. J. B. Perky, State Director of Vocational Education, granted the writer permission to examine the records from the files in the State Office of Vocational Education and to compile data concerning these fifty "above-average" departments of vocational agriculture and the fifty "below-average" departments. The data were gathered for a three-year period. Eighty specific factors were selected in an attempt to detect statistical differences between these groups of departments. The "t-test" was made through the use of the critical ratio to detect significant differences between the two groups of departments. It was assumed that those factors from which data revealed significant differences between the "above-average" group of departments and the "below-average" departments were valid measures to be used in evaluating departments of vocational agriculture. The following paragraphs will deal only with those factors directly related to the supervised farm training program.

Differences Found

Some of the measures of supervised farm training considered in this study which exhibited significant differences between the above-average departments and the below-average departments were: the average number of production projects completed per department and per student; the average number of improvement projects completed per department and per student; and the average number of supplementary farm jobs completed per department and per student. The above-average departments averaged 105.5 production projects annually in contrast to an average of 66.0 for the below-average departments. The average number of production projects completed annually per student was 2.26 for students from the above-average departments and 1.53 for students from the below-average departments. The above-average departments averaged 227 improvement projects completed annually in comparison to 151 for the below-average group. The above-average group of departments showed a mean of 692.5 supplementary farm jobs completed with an average of 15.53 supplementary farm jobs completed per student; the below-average departments averaged 460.5 supplementary farm jobs with 11.33 being the student average for that group.

The average investment in the total supervised farming programs displayed a great difference between the two groups of departments. The fifty above-average departments averaged $31,000 invested in production projects with the fifty below-average departments averaging $16,850. Students from the above-average departments had an average investment of $740 in supervised farming programs in contrast to an average investment of $396 for students from the below-average departments. The labor income per student also showed a highly significant difference with the average student labor income being $346.50 for the above-average group and $178.50 for the below-average group.

A comparison of the two groups of departments was also made comparing the average amount invested in specific enterprises such as investment in beef production projects, swine, and crops. In these measures the above-average departments had from 170 to 214 per cent more invested than did the fifty below-average departments. In most instances the average labor income per department also showed a significant advantage for the above-average departments.

Supervision a Factor

It has been assumed that a satisfactory supervised farm training program must be supervised and encouraged by the teacher of vocational agriculture devoting a considerable amount of his time in supervising the farming programs of his students. This study supports this belief. Teachers from the fifty above-average departments averaged 547.5 supervisory farm visits per year in contrast to an average of 349.5 visits by teachers from the below-average departments. Students from above-average departments were visited 12.68 times during the year. This would be an average of approximately one visit per month. Students from the below-average departments were visited an average of 9.02 times annually.

The findings of this study support the statement that a strong supervised farm training program is a vital and essential part of any practical educational program in vocational agriculture as stated in the first paragraph. It would seem that concrete data such as these furnish one practical way to say, "Here is some proof!" □

*Based upon doctoral dissertation, "An Analysis of Factors Contributing to Effective Programs of Vocational Agriculture," Oklahoma A & M College, 1955.

Seventeen years of farmer education

A review of progress in one community

H. T. PRUETT, Teacher Education, Alabama Polytechnic Institute

The Clubhouse at Woodland.

FEW rural communities can match the phenomenal progress that the Woodland, Alabama, Community has made in the last seventeen years. With a meager start toward an adult farmer program in 1938 at Woodland, the program has grown into one with high objectives and an excellent record of accomplishments.

Woodland is a rural neighborhood located eight miles southwest of Notasulga, Alabama, and five miles north of Tuskegee, Alabama. The children of the Woodland neighborhood attend elementary and high school at the Macon County High School, Notasulga, Alabama.

Mr. P. H. Alsabrook, vocational agriculture teacher at the Macon County High School, organized the first adult-farmer class at Woodland in the fall of 1938. For a period of two years, Mr. Alsabrook conducted what he termed a "shot-gun type," or a cross-sectional type of adult class. A series of ten or twelve meetings was held each year, at which time he gave lectures to the farmers on technical agricultural subject matter on selected topics. During the series of meetings, topics on several farm enterprises would be discussed.

Changes in the Program

In 1940, Mr. Alsabrook and several farmers in the Woodland adult-farmer class decided to organize a community type class—one in which they would build their activities around definite community projects, a type of program in which they could use the local talent through committee work and other activities. The members secured permission from the County Board of Education to use an abandoned one-room school building for their permanent meeting place. Later the County Board of Education deeded the old building and two acres of land to the Adult-Farmer Community Club.

By 1950, the Adult-Farmer Community club had outgrown the one-room school building and, through the efforts of the members under Mr. Alsabrook's leadership, a modern concrete block building was constructed. The new community clubhouse serves the community in many ways. The adult-farmer group rents the building to other groups for special programs and parties. An example of some groups who have used the building are Home Demonstration Club, family reunions, birthday parties, FFA socials, and church socials. The clubhouse is equipped with a modern kitchen, including a gas stove, refrigerator, dishes and other utensils. Other necessary equipment in the building includes gas heaters, a piano, tables, chairs, and benches. The size of the building is 30 x 60 feet.

Projects Which Have Been Conducted

Since 1940 the Woodland Adult-Farmer Club has successfully sponsored a large number of cooperative projects. Several are listed below:

1. Secured telephones for the farmers of the area.
2. Sponsored paved highway projects —now three paved highways pass through the Woodland area.
3. Built a very excellent creosote plant.
4. Sponsored a food preservation program including the building of a community canning plant.
5. Planned, financed and built a community house, 90 per cent labor donated.
6. Projects which included the improvement of better varieties of field crops, vegetables and fruits.
7. A community home beautification project — including landscaping, painting, and lawn improvement.
8. Corn contests which have been going for several years.
9. The introduction of several new farm enterprises to supplement the cotton enterprise. In 1938, cotton was the major cash crop. New enterprises in the community which are now established are: sheep, sugar cane, sweet potatoes and truck crops.

Procedures Used in Conducting Meetings

Regular, scheduled, monthly meetings are held in which the attendance is made up of men. There is a corps of officers consisting of a President, Vice-President, Secretary, Treasurer, and Program Committee. Mr. Alsabrook, the Vocational Agriculture Teacher, is a member of the Program Committee. The President presides at each meeting. All officers are farmers. At these meetings, reports are heard from various committees who are working on certain projects. The members discuss the reports and accept or reject the committee's recommendation. Plans are made at the general meetings for further research and study necessary for the completion of the project to which a given committee is assigned. In addition to the regular monthly meeting, twelve to fifteen special meetings are held each year. At the special meeting, to which the women are invited, usually about fifty families are present. The special meetings consist of guest speakers such as members from the Extension Service, Soil Conservation Service, a person from the State Agricultural College at Auburn, a member of the local club and others. One meeting during the year is in the form of an annual barbecue at which time a member of the farmers' club is elected "Man of the Year" in the community. The Woodland Farmers' Club is a fine example of what can be accomplished in thousands of rural communities in this country under the leadership of Vocational Agriculture Teachers like Pat Alsabrook. □

Evaluation—Process and Product

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plored by analytical research. Until more information here is available on the amount and direction of the change that may be expected to occur under any given set of conditions, a mere description of farming programs is insufficient for ascertaining the actual changes that occur or have occurred.

Evaluation must necessarily involve the use of criterion measures or standards of judgment. They should be clearly defined and readily assessable. It is generally agreed that interests, abilities, attitudes, skills, and appreciations are all learned. Standards of judgments may be used for each of the kinds of learning if, indeed, they have been proposed as objectives of the educational enterprise. Factors of success are deceptively scattered along a time dimension. The impatient evaluators would necessarily choose criteria that are different from those selected by evaluators with interests in long-term or delayed outcomes. The choice of criteria requires painstaking judgment with particular attention to the sample of behavior being evaluated.

Objective evaluation can provide inumerable stepping stones to improved practice. The challenge is large and rewarding. Its continued and improved practice will contribute immeasurably to the science of agricultural education.

★ ★ ★

To Be Featured in June—

The Summer Program

★ ★ ★

Do students' farming programs lead to establishment in farming?*

This study answers "yes" if programs meet certain criteria.

FRED C. SNYDER, Vo-Ag Instructor, Mifflinburg, Pennsylvania

Fred C. Snyder

THE in-school farming program of the student is the core of instruction in high school classes in vocational agriculture. An objective of vocational agriculture, one many educators consider the most important, is to aid students to become established in farming. As reported in other studies, teachers assisted students to improve the quality of their farming programs using criteria which had been found most frequently in what were considered to be superior farming programs. These criteria, although found in significantly larger numbers in superior farming programs, do not necessarily contribute to establishment in farming by the individual since data on relationship to occupational status were not included.

Statement of the Problem

The primary purpose of this study was to develop and validate criteria of farming programs of in-school students of vocational agriculture in Pennsylvania which contribute to establishment in farming. The criteria of the study were based upon objective and measureable elements of the farming program. One or more of the characteristics of time, size or quantity, or of definite managerial decisions were involved in each criterion in the study.

Design of the Study

Tentative criteria were formulated by using the information gained in a critical review of literature, by securing information from the Department of Agricultural Education, The Pennsylvania State University, and by drawing upon the personal experience of the author.

These tentative criteria were tested for completeness by an initial validation process. The initial population selected was the total of 154 former students of vocational agriculture in the Mifflinburg High School who had completed one or more years of vocational agriculture, who were dropped or graduated from high school before or during 1951, and who were residing in Union County at the time the study was in progress.

The new insights and understandings gained in the initial validation process provided the basis for revision of the tentative criteria and altering the design of the study.

Former students of vocational agriculture were stratified according to occupational status, opportunity for establishment in farming at the time they attended high school, and the school they attended. Multiple analysis of variance separated and tested the three main factors, occupation, opportunity, and school, and their interactions. Thus, possible sources of bias were controlled in testing the criteria for significance. The sources of variation were identified and the resulting reduction of the "within" source of variation was accomplished by using multiple analysis of variance as the statistical model. The 5 per cent level was chosen as the standard for acceptance or rejection of the hypotheses of the study and of each criterion.

The population for the final validation process consisted of 180 former students of vocational agriculture. A panel of three former students of vocational agriculture classified all former students in their high school who were dropped or graduated in vocational agriculture during the period 1942 to 1951, inclusive. The names of twelve former students were randomly selected from each school in such a manner that the sample consisted of the following:

- Two individuals now farming who had below average opportunity
- Two individuals now farming who had average opportunity
- Two individuals now farming who had above average opportunity
- Two individuals not now farming who had below average opportunity
- Two individuals not now farming who had average opportunity
- Two individuals not now farming who had above average opportunity

Twelve such individuals were interviewed in each of fifteen randomly selected Pennsylvania high schools by the author during the winter of 1955 and the information was recorded on the schedules.

In order to weight each criterion equally in obtaining a total score for an in-school farming program, and in order to make the criteria comparable, the data were converted to standard scores in such a manner that the mean was fifty and the standard deviation ten. Qualitative criteria were arbitrarily assigned a value of 4 if the conditions of the criteria were met, and a value of 0 if the requirement had not been met by the individual. The conversion to a standard score automatically corrected any error which might have been made in assigning values and made it possible to include these criteria in the testing of the total in-school program in its effect on establishment in farming.

Findings and Interpretations

The data indicate that the in-school farming program is very significantly related to the occupation, with those individuals who are now farming having had a mean score of 52.2, while for those individuals who are not now farming the mean was 47.9. The importance of the in-school farming program as a determinant of future occupation is further emphasized by a comparison of the mean score of those now farming who had below average opportunity and the mean score of those not now farming who had above average opportunity. The former score was 50.7, while the latter was 48.6.

The data indicate that the score achieved by the individual was affected by the opportunity which was available to him. The mean score of the in-school farming program of those individuals who had below average opportunity was 48.4; average opportunity, 50.3; above average opportunity, 51.4. These differences were significant.

Differences existed in the mean scores for the total in-school farming programs of individuals enrolled in different schools, but were not large enough to be significant.

The data indicate that the better farming programs, as evaluated by the set of criteria of this study, lead to establishment in farming. Each individual criterion was then tested to determine its relationship to establishment in farming. The following were found significant:

1. The goal of the individual at the time he plans his long-time farming program is establishment in farming.
2. The productive enterprises of the farming program are associated with the type of farming in which the individual desires establishment.
3. The farming program of the individual includes a goal of farming, major livestock productive enterprises, minor livestock productive enterprises, major crop productive enterprises, minor crop productive enterprises, contributory feed-crop enterprises, and supplementary farm practices.
4. The main productive enterprise of the farming program is an enterprise which is of major importance on farms in the area.
5. The main productive enterprise is continued from year to year.
6. The main productive enterprise of the farming program increases in size each year.
7. A large number of productive enterprises is included in the farming program.
8. A variety of farm enterprises is included in the farming program as productive enterprises.
9. The productive enterprises of the farming program meet the minimum size set as the standard for that enterprise in the state project contest.
10. Contributory feed-crop enterprises

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*Based on Thesis by Fred C. Snyder, "The Development and Validation of Criteria of Farming Programs of In-School Students in Vocational Agriculture in Pennsylvania Which Contribute to Establishment in Farming," Unpublished Doctor's Dissertation, Library, The Pennsylvania State University, University Park, 1955, 180 pp.

Your answer to this question affects your evaluation practices.

Is "doing" the test of "learning to do"?

JOHN A. SNELL, Supervisor, Augusta, Maine

John A. Snell

TEACHERS are expected by their students, by parents, and by school administrators to make some kind of appraisal of student achievement or progress. In many cases, a single over-all mark or grade may satisfy this demand, but any teacher worthy of the name seeks to appraise student progress in order that he may teach and the pupils may learn more effectively. This calls for careful checking of actual outcomes against the desired goals or objectives, and a continual effort to so modify his methods, techniques, and emphasis that these goals may be reached more completely.

The evaluative process should also serve to direct the student's attention to the *real* goals of his work in vocational agriculture. It has been said that "we teach what we test." In other words, whatever goes on the student's school records assumes major importance in the student's mind, regardless of what we may *say* about the importance of other things. If school marks are based upon paper tests and other types of classroom activity, the student's objective will be to do well in these phases, and no matter what we may tell him, he will inevitably consider the farming program of secondary importance.

Educators agree that real learning is evidenced by changes in behavior; that is, by changes in the manner in which students think and act. If we honestly desire to measure or appraise learning, we must do it in terms of such behavior changes. The concept of "progress" in learning implies a starting point and a direction, the direction being determined by the goals or desired behavior changes identified for the particular learning process. The only valid measure of student progress is in terms of the goals attained.

Relation to Primary Aim

It is generally agreed that the *primary* aim of vocational agriculture is "to train present and prospective farmers for proficiency in farming." If this is accepted, it becomes obvious that the real measure of student progress and the effectiveness of instruction in vocational agriculture is the nature of the student's performance in farming. *Any other measure is a substitute or short-cut and lacks validity and reliability to some degree.*

Members of young or adult farmer classes generally have opportunities to apply to their farming operations whatever increased skill and ability they may have received from a program of instruction. This is particularly true if the instruction is geared to the recognized needs of these men as, of course, it should be. Under such conditions, and unhampered by the demands of a traditional grading system, most teachers would agree that the success of instruction could best be measured by certain specific developments in the farming proficiency of these men.

Some Teacher Reactions

Why, then, do not vocational agriculture teachers make the individual farming program of the day-school student the basis of all progress evaluation? Is not the student's actual work with his farming program the logical test of increased proficiency in farming? Observation indicates that many teachers give varying degrees of emphasis to the farming program in evaluation of student progress. It has given the writer some concern to find some teachers who give it little or no consideration. Let us examine some of the possible reasons which might be advanced for this situation.

1. The teacher may say, "The primary aim of 'proficiency in farming' represents a long-range goal for a student. We are required to make frequent periodic evaluations. We cannot wait to measure progress by what a boy does in farming: we must substitute some other basis of appraisal so that it may be done immediately."

There is considerable truth in the above statement, but it is a mistake to think chiefly in terms of what the student may be called upon to do at some vague period in the future. Instead, the teacher should constantly think in terms of short range and immediate objectives *which are components of the larger aim of "proficiency in farming."* These can be taught and evaluated as instruction goes forward. To the extent that practice on the job is part of the instructional process (as it must be in true vocational teaching), the evaluation can be based upon actual performance. Should not the individual farming program be the first and most logical place to check such performance?

Examine Your Objectives

2. "But," says the teacher, "the farming program of the average student does not provide opportunities for him to demonstrate all the skills, abilities, attitudes, and understanding which a teacher needs to evaluate."

This is all too true in many cases, and may contain implications for some revision in the teacher's conception of (a) his more immediate teaching objectives, and (b) the activities which make up a farming program. Is the instructional program based largely upon the most immediate needs of the students? If so, the jobs which they face in their farming programs will receive first consideration. This is not only imperative in respect to the students' needs, but it is psychologically and pedagogically sound. There is no time when a job can be taught so effectively as when the student comes face to face with it in his own personal experience.

Does the student's individual farming program comprise *all* the farming activities in which the student engages? Would it be larger in scope and more comprehensive if the students were to see its full importance and meaning, and if it was utilized as the basis of appraising his progress? Does the school or the teacher take any responsibility for finding opportunities to augment the farming programs of individual students?

Because of some limitations in student farming programs, it may at times be necessary or desirable to give instruction in a job for which the individual farming program does not provide adequate opportunity for application. On the other hand, there is *some* opportunity to make application or to practice under supervision (on the home farm, school farm, or elsewhere). If there is no opportunity of this kind, should the teacher attempt to teach the job? Can we, as teachers, expect students to develop skills and abilities, no matter how desirable, unless they have an opportunity to practice them *now*? Let us remember that learning is changed behavior and "if the learner hasn't learned, the teacher hasn't taught."

Meaning of Performance

3. "Even so," replies the teacher, "the student's work in relation to his farming program is seasonal in nature and does not lend itself well to periodic evaluation in accordance with the demands of a six-week or nine-week grading system."

This is true, if the farming program is considered as something which takes place entirely outside the classroom. If it is as important as we *say* it is, however—if it is the basis of related instruction and evaluation, it follows that some aspects of the farming program (planning, execution, record keeping, studying, and analyzing) will be in progress at all times. This would be true even though actual farming operations were not continuous. It is obviously better if the farming program is continuous and expanding both in total scope and in managerial responsibility, providing new problems and opportunities for growth in learning.

Let us be sure that our concept of "performance" is sufficiently broad. Proficiency in farming involves abilities in management. Success in farming is perhaps more dependent upon the right kind of management than upon production practices in themselves. Some managerial abilities are demonstrated in planning, and in analyzing a farming program to find means of improvement. *If these involve real farming enterprises*

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What is important?

in organizing, conducting, and evaluating adult farmer courses?*

H. W. KITTS, Teacher Education, University of Minnesota

Harry W. Kitts

OVER a period of years, experience indicates to teachers certain practices are workable and contribute to successful adult farmer classes. Conditions vary from community to community and may limit the general adoption of these practices. The supervisors and teacher trainers of the Central region made a study of 660 adult farmer programs reported in 1951-52 in twelve of the states of the region. This represents a 91.5 per cent return of the schedules mailed to teachers in a fifty per cent sampling.

Teachers were asked to rate the practices they used as of "much value," "some value," "no value," or "uncertain." These were assigned a number as follows: "much value"—1, "some value"—2, "no value"—3, and "uncertain"—4. The arithmetic mean was determined for each practice rated by the teachers.

The practices rated most valuable by teachers are given in table 1.

It will be noted that some practices, although reported by only a few teachers, were rated highly by those individuals. Table 2, listing the practices used by large numbers of teachers, indicates that some practices are used by teachers although the practices are not given high value rating.

Table 1. Practices used by teachers of vocational agriculture in organizing, conducting, and evaluating adult farmer courses in the Central Region, 1952.

Practice	*Per cent of teachers using*	*Teacher's value rating*
Use role playing in conduct of classes	7.5	2.30
Have director of adult education in school	12.2	2.17
Record class discussion and play back	5.5	2.16
Inform other faculty members of adult farmer program	86.7	2.03
Hold class meetings only during the day	4.2	1.91
Use supervised study in conducting class	20.2	1.90
Recruit members by announcement at athletic events, church activities, service clubs	35.6	1.89
Allow class members to smoke during class	72.9	1.88
Postpone certain content from high school and young farmer classes until the adult farmer level	32.6	1.85
Have advisory committee members pay for refreshments	4.3	1.83
Use an examination, not graded, near beginning of course	14.6	1.81
Use formal survey in planning the program	50.2	1.80
Use a "suggestion box" in planning the instruction	23.3	1.80
Elect a discussion leader in the class	17.5	1.80

Table 2. Practices used by ninety per cent or more of teachers of vocational agriculture in organizing, conducting, and evaluating adult farmer courses in the Central Region, 1952.

Practice	*Teacher's value rating*	*Per cent of teachers using*
Discuss proposed plans at first meeting	98.8	1.22
Start and stop meetings on time	98.5	1.21
Use local situations as examples	98.2	1.19
Avoid conflicts, whenever possible, with all school activities	97.3	1.19
Use film, film strips, or some type of visual aid frequently	97.0	1.25
Use local data in class discussions	96.7	1.19
Use local papers to carry announcements of program	96.4	1.35
Use demonstrations	95.8	1.24
Base discussions on the problems of the members	94.6	1.20
Take time to summarize frequently	94.5	1.38
Conduct group discussion type meetings	94.0	1.21
Schedule slide films, movies, etc. in advance of course	94.0	1.32
Secure administrative approval to conduct adult farmer program	94.0	1.37
Ask direct questions of individuals	93.9	1.56
Keep the opinions of the teacher out of the discussion until the ideas of all the group have been expressed	93.6	1.42
Keep superintendent and principal informed at all times	93.1	1.44
Study regularity of attendance of members to evaluate program	92.7	1.50
Ask provocative or controversial questions to draw problems from the group	92.4	1.48
Use speakers in conducting classes	91.9	1.47
Use questions that call for opinions, not facts	91.8	1.70
Assist in formulating plans of action	91.2	1.54
Give away educational materials at meetings, e.g., gestation charts, bulletins	90.6	1.53
Use farm visits by instructor to evaluate program	90.2	1.23

Some teachers have discontinued using a practice which is still being used by a large per cent of teachers (table 3). It is evident that some practices might have been used and discontinued by some teachers, yet this same practice may never have been used by many of the teachers reporting (table 4). Since these teachers had not used the practice they did not give the practice a value rating. From the small number of practices reported to have been used at one time and subsequently discontinued, the authors were led to conclude that teachers tend to adopt new ideas when they hear about them or understand how to adopt them in their particular school situation without discontinuing many of the practices previously used. The result is that a number of practices being used were reported to be of relatively low value (table 5), but they had not been discontinued. Many of those practices reported by the same teacher appear to be a duplication of effort.

The survey indicated that many teachers appear to have spent a disproportionate amount of time on the promotion and advertising of the program. Teachers well might use much of the time now spent in preparing circular letters, postal card notices, posters, or newspaper articles for more adequate class preparation or for on-farm instruction. Teachers have discovered through experience that members of adult classes are not truly captive audiences. A farmer may fail to attend future sessions if the teacher does not use a presentation acceptable to him. Responses indicated that teachers were using democratic methods of planning and organizing programs, often working through advisory councils, class committees, school authorities, and other educational agencies to plan and coordinate their offerings. Instruction was by group participation rather than dominated by class lecture. Local data and problems of class members were the bases for discussions, panels, and demonstrations. This study indicated a need for a greater amount of systematic planning and provision for the instruction to be continued during the entire year, especially the summer months, and

* Based on a study in the Central Region, directed by Harold M. Bryam, Michigan State University, Harry W. Kitts, University of Minnesota, and Lloyd J. Phipps, University of Illinois and other state representatives. Published by the Bureau of Research and Service, Michigan State University, East Lansing, Mich. 60c.

Table 3. Practices discontinued by five per cent or more of the teachers of vocational agriculture compared to those continued in organizing, conducting, and evaluating adult farmer courses in the Central Region, 1952.

Practice	*Discontinued (Per cent)*	*Continued using (Per cent)*	*(Value rating)*
Conduct a summer picnic	13.3	9.1	1.52
Hold meetings in a rural school, church, or other neighborhood location	9.7	32.6	1.49
Award attendance diplomas	7.6	29.8	1.57
Use formal surveys in planning program	6.7	43.5	1.80
Conduct a course of 10 meetings a year	6.3	48.6	1.49
Have superintendent and/or principal welcome class members at the first meeting	5.7	19.6	1.77
Pass out a discussion outline to help farmers stay on subject	5.5	42.6	1.62
Provide members with written summaries of meetings	5.2	34.7	1.55
Have members organize themselves and elect officers	5.1	33.2	1.70

over a period of years rather than short intensive periods. Teachers, school administrations, and people of the community recognize that if the program of adult education in agriculture is to become successful and available to all age groups in the community, it would be expected that additional personnel should be employed and more time be made available for work with educational programs for adults. □

Table 5. Practices used by teachers of vocational agriculture in organizing, conducting, and evaluating adult farmer courses in the Central Region, 1952, with a value rating below 1.30, and the per cent of teachers using each practice.

Practice	*Per cent of teachers using*	*Teacher's value rating*
Use president or secretary of class to open meetings, review previous meetings, and make announcements	21.7	1.07
Use an advisory committee or council	60.7	1.08
Give some information about each class member introduced	49.8	1.09
Avoid conflicts, whenever possible, with all-school activities	97.3	1.19
Use local situations as examples in class	98.2	1.19
Use local data in class discussions	96.7	1.19
Base discussions on problems of members	94.6	1.20
Hold conferences with special teachers	48.5	1.20
Start and stop meetings on time	98.5	1.21
Conduct group-discussion type meetings	94.0	1.21
Use field trips, tours, or field days for instruction	68.3	1.21
Visit farmer enrollees before the first meeting of the course	78.0	1.22
Secure last periods of school day for the organization of an adult program and visitation of class members	56.7	1.22
Discuss proposed plans for conducting classes at first meeting	98.8	1.22
Use farm visits by instructor to evaluate program	90.2	1.23
Use production records of class members to evaluate program	57.3	1.24
Use demonstrations	95.8	1.24
Use films, film strips, or some type of visual aid frequently	97.0	1.25
Use advisory committee to evaluate the program	46.0	1.25
Providing seating arrangement so all persons can see faces of the others	50.6	1.28
Provide a bus for transportation on field trips	24.1	1.28
Use class committee to conduct social activities and special features	37.5	1.28
Secure relief from other school responsibilities to provide teacher time	38.4	1.29

Is "doing" the test - - -

(Continued from Page 247)

of the student, requiring the use of judgment and critical thinking in solving his own problems, such activities are as much performance on the job as planting or harvesting a crop.

Effect of Tradition

Our goals and objectives will also include the development of desirable attitudes since they are important to success. Attitudes can be evaluated *only* on the basis of how the student responds to certain situations and how he attacks his own problems. This, too, is performance.

4. Finally the teacher says, "It is much more difficult to evaluate student progress in terms of actual performance than by more traditional methods."

Perhaps this is more of an excuse than a reason. Can it be that some teachers are too much influenced by the traditional classroom teaching methods and rely too heavily on such devices as paper and oral tests? In practice, it is not difficult to evaluate progress by means of performance on the job *if objectives are very clear and if suitable criteria have been established.* In fact, it is probably the easiest means, and is certainly one which students can understand and appreciate.

Teachers may have other reasons than those enumerated above for not placing more emphasis upon the farming program as a basis of evaluation, but the validity of performance is the strongest possible argument for its use. Performance on the job is the only completely valid measure of progress in any type of vocational training. The mechanics used may vary widely, but the conscientious teacher can find means of giving student performance, especially in the individual farming program, the emphasis and attention it warrants. □

Table 4. Practices NEVER used by eighty per cent or more of teachers of vocational agriculture in organizing, conducting, and evaluating adult farmer courses in the Central Region, 1952.

Practice	*Per cent of teachers reporting*
Hold class meetings only during the day	95.8
Have advisory committee members pay for refreshments	95.7
Use role-playing in conducting classes	92.5
Provide a class evaluator or observer	89.9
Hold meetings in homes of class members	89.1
Have a director of adult education in the school	87.8
Obtain donations from organizations and businesses for refreshments	87.5
Have a member or a committee of members act as receptionists during the first two or three class meetings	87.3
Conduct a summer picnic	87.2
Conduct two or more courses simultaneously	86.7
Have an already organized group, such as community club, sponsor a course or courses	85.5
Use an examination, not graded, near beginning of the course	85.4
Have class, as a group, visit each member's farming program	84.2
Use businessmen to evaluate the program	83.2
Elect a discussion leader from the class	82.5
Set maximum limits on class size	80.4

A study of Vo-Ag Graduates in North Dakota reveals - - -

Factors associated with entrance into farming and nonfarming occupations

DONALD O. ERICKSON, Vo-Ag Instructor, Rugby, North Dakota

"WHAT factors in the background of high school graduates with vocational agriculture training in North Dakota seem to influence these young men most in becoming established in farming?" A randomly selected group of 182 respondents who graduated from North Dakota high schools during the period 1948 through 1954 and who had received one or more years of training in vocational agriculture and who were occupationally employed at the time of study,* provided some interesting answers to this question.

A total of 101 of these respondents had become engaged in full-time farming following high school graduation. An additional 27 were involved in part-time farming while 54 were nonfarmers. On the basis of the replies obtained, it was discovered that 70.8 per cent of the graduates studied were making use of their training in the farming occupation. A study of the factors related to the choice of occupation resulted in the emergence of some rather well-defined patterns.

Positive Factors

The factors found to be most closely associated with entrance into farming, ranked in descending order, were:

1. Having a strong desire to farm.
2. Having a father who was an owner-operator or an owner-tenant farmer or rancher.
3. Having been reared on a farm of greater size than the average for the community.
4. Having experienced parental interest and attitude that encouraged entrance into farming.
5. Having developed proficiency in farming as a result of training received in vocational agriculture.

A further test by means of chi-square on data assembled indicated a positive significant relationship between the following factors and the choice of a nonfarming occupation:

1. Having a father who was not a full-time farmer.
2. Having no actual farming experience immediately following graduation.
3. Having had military service following high school graduation.
4. Having two or more brothers.
5. Having been reared on a specialized type of home farm or ranch.

In the group studied, the number of brothers possessed by the respondents seemed to be particularly closely related to the choice of occupation. No attempt was made in this study to determine whether the brothers were older or younger than the young men who responded in the study. Conceivably, this information would be of considerable value since it seems probable that the influence of younger brothers would be less marked than that of older brothers. We are still somewhat people of tradition. The age-old custom of the eldest son carrying on in his father's footsteps would quite likely prove significant in the young man's choice of a farming occupation, or conversely in the case of those respondents with older brothers, the selection of nonfarming occupations. The prospect of some day inheriting the home farm likely would have some effect on the occupational planning of the young men involved.

Effect of Military Service

Some indications were discovered that military service tended to change the occupational objectives of the young men in the group studied. Such service was found to be closely associated with the decision to go into nonfarming occupations. Probably the specific job training available in the armed forces opened up other avenues of employment hitherto unknown to many of the high school graduates. Further, the expectation of compliance with military service may have tended to inhibit some of the young men in their plans to grow into the farming business.

The size of the home farm appeared to be important in the respondent's decisions to enter farming. The capability of the home farm to support more than one family quite likely would have a bearing on occupational choice. It may be inferred that the high degree of mechanization on the typical North Dakota farm today has made it possible for one man to operate land that a generation ago would have taken a large crew of men to handle. If the farm is of sufficient size to supply work and income for more than one family unit, the liklihood of the boy to remain in farming will be considerably increased.

Influence of Early Experience

It seems evident that there is little likelihood of a young man's entrance into a farming occupation unless he begins his farm experience at a rather early age. For the group studied, those young men who did not have some actual farm experience immediately following high school graduation did not tend to become established in farming during the period covered by this study.

It was interesting to note the apparent close relationship between the tenure of the parents on the home farm and the choice of farming occupation. Perhaps it may be inferred that long tenure on the home farm may be related to a group of factors, some materialistic and some of a psychological nature. It seems reasonable to assume that in most instances long tenure would be associated with success on the home farm, and to a still greater extent, with satisfaction with the type of family living provided thereon. Conversely, the feeling of insecurity that might conceivably result from frequent moves from one farm to another, or from one occupation to another, might have a marked adverse effect on the respondent's desire to farm. Also, short tenure on the farm may be related to lack of success in the farming business or dissatisfaction with the family income or environmental conditions that the farm had provided.

A factor of major importance to workers in the field of agricultural education may be noted in the close association that exists between entrance into farming and the number of years of training in vocational agriculture. It seems evident that school superintendents, principals and vocational agriculture instructors should give recognition to this relationship in offering proper guidance to students enrolled in secondary schools.

Effect of FFA

For the group studied, those respondents who had earned advanced degrees in the FFA showed a significantly high tendency to become established in farming. Probably the advanced degree is a reflection of a desire to excel in the field of agriculture coupled with the ability and the opportunity to achieve this goal. Vocational agriculture is designed to train present and prospective farmers for proficiency in farming. The FFA is an integral part of this training program. The results noted in this study tend to support the assumption that the recipients of the advanced degrees have met the requirements for these honors and have shown evidence of having made a beginning in establishment in farming. Continued careful selection on a Chapter, state, and national level of only those candidates found worthy of advanced degrees seems worthwhile on the basis of this information.

In conclusion, the findings of this study indicated rather definite patterns of factors which seem to play a part in the choice of farming occupations. Two basic factors seem to emerge relative to entrance into the farming occupation, namely: an interest in and a liking for the occupation of farming and the existence of a favorable opportunity on the home farm to make a beginning and advance in establishment in farming. For the nonfarming group, the reverse of factors indicated above predominated relative to non-entrance into the farming occupation. □

*Study conducted by Donald O. Erickson as part of a Master's degree program at Colorado A & M College.

FFA Dates to Remember

July 23-28—Annual Joint Meetings, FFA Board of Student Officers and Board of Directors, Washington, D. C.

Sept. 25-28—NFA National Convention, Municipal Auditorium. Atlanta, Ga.

Oct. 1-2—National FFA Judging Contests, National Dairy Cattle Congress, Waterloo, Iowa.

Studies in progress in agricultural education

Reported for the year ending May, 1956

NORTH ATLANTIC REGION

Compiled by Henry S. Brunner
The Pennsylvania State University

ABBOTT, CHARLES F.—"A Program of Summer Activities for Teachers of Vocational Agriculture in New York." Problem, M. Ed., Cornell University.

AHALT, ARTHUR M. and MURRAY, RAY A.—"Classroom Equipment List for Vocational Agriculture in Maryland." Non-thesis study, Dept. of Agricultural Education, The University of Maryland.

BONNER, LEON W.—"Factors Associated with the Academic Achievement of Freshman Students at a Southern Agricultural College." Thesis, D. Ed., Department of Agricultural Education, The Pennsylvania State University.

BRISTOL, BENTON K.—"Relationship Between Certain Factors Affecting the Learning Situation and the Adoption of Approved Practices in Tractor Operation and Maintenance by High School Students in Vocational Agriculture." Thesis, D. Ed., Department of Agricultural Education, The Pennsylvania State University.

BRISTOL, BENTON K.—"An Analysis of Current Farm Tractor Manuals and Texts with Suggestions for Improving the Presentation of Approved Practices." Special Problem, Department of Agricultural Education, The Pennsylvania State University.

BRISTOL, BENTON K.—"Tool Storage Systems for Pennsylvania High School Farm Mechanics Shops." Special Problem, Department of Agricultural Education, The Pennsylvania State University.

BURGHER, DANIEL J.—"An Examination of Some Fundamental Principles of Extension Programme Building and Their Applications to Jamaica B. W.I." Thesis, M.S., Cornell University.

BUSBICE, WAYNE E.—"Changed or Improved Practices Have Grown Out of the Gaithersburg Adult Farmer Program." Special Problem, Department of Agricultural Education, The University of Maryland.

CAREY, WILLIAM—"A Survey of Occupations of Former FFA Students." Problem, M.S., Department of Education, University of Massachusetts.

CALLISON, GILMER, W.—"Home Farms of Vocational Agriculture Pupils in the Independence High School Area (Virginia)." Problem, M.S., Department of Agricultural Education, West Virginia University.

DUTROW, DONALD R.—"Development of Norms for the Pennsylvania Farming Program Criteria Scales." Paper, M.Ed., Department of Agricultural Education, The Pennsylvania State University.

GERHART, H. BRINTON — "Attitudes of Citizens and Educators Which Are Associated with the Occurrence of Young Adult Farmer Education in School Systems of Pennsylvania." Paper, M.Ed., Department of Agricultural Education, The Pennsylvania State University.

HANNA, LEEROY P.—"A Program of Vocational Agriculture for Young and Adult Farmers of Hillsboro High School Area." Thesis, M.S., Department of Agricultural Education, West Virginia University.

HARGRAVE, HARVEY M. — "Determining the Progress and Changes in Farm Organization as They Relate to the Livestock Program Among Members of the East Arcadia, N. C., Adult Farmers Class." Special Problem, Department of Agricultural Education, The Pennsylvania State University.

HUGHES, BYRON A. — "Organizing a Young Farmer Program in Vocational Agriculture at West Greene High School (Pa.)." Problem, M.S., Department of Agricultural Education, West Virginia University.

JARMIN, MARTIN V. — "What Factors Should Be Considered in Determining the Adequacy of Institutions Training or Preparing to Train Teachers of Vocational Agriculture?" Thesis, M.S., Cornell University.

JUERGENSON, ELWOOD M.—"Relationship Between the Ability of Teachers to Do Critical Thinking and Their Performance in Teaching." Thesis, Ph.D., Department of Agricultural Education, The Pennsylvania State University.

KELLER, E. CECIL—"A Further Analysis of Scholastic Achievement of High School Vocational Agriculture Students in the College of Agriculture at The University of Maryland." Thesis, M.S., Department of Agricultural Education, The University of Maryland.

KENT, WILLIAM R. JR.—"An Attempt to Locate Criteria for Predicting Future Leadership of Farm Boys." Thesis, M.S., Department of Agricultural Education, University of Maryland.

MARTIN, W. HOWARD — "Farm Related Services Utilized on Home Farms of Vocational Agriculture Students in Connecticut." Non-thesis study, Department of Agricultural Education, University of Connecticut.

MOSTOWSKI, JOHN J.—"The Guidance of Students in High School with Emphasis on Vocational Agriculture." Thesis, M.S., Department of Agricultural Education, University of Maryland.

MOSTOWSKI, JOHN J.—"Problems of Vocational Agriculture Departments of Maryland." Special Problem, Department of Agricultural Education, University of Maryland.

PEASE, DOUGLAS S.—"The Use of Advisory Councils in Local Departments of Vocational Agriculture." Paper, M.Ed., Department of Agricultural Education, The Pennsylvania State University.

PERSONIUS, KIRKWOOD E.—"An Examination of a Method of Determining the Instructional Needs of a Group of Young Farmers in the Penn Yan, New York, Community." Thesis, M.S., Cornell University.

PLUTO, HENRY S.—"The Development of Agricultural Education in Wayne County, Pennsylvania, in Relation to the Agriculture of the Area." Paper, M.Ed., Department of Agricultural Education, The Pennsylvania State University.

REIMOLD, IVAN L.—"Significance of Vocational Guidance Activities in the Problem of Student Drop-outs from Vocational Agriculture." Paper, M. Ed., Department of Agricultural Education, The Pennsylvania State University.

ROBINSON, JAMES D.—"Value Folk Placed on the School-Community Cannery in the Shady Springs Area." Thesis, M.S., Department of Agricultural Education, West Virginia University.

SMITH, FRANKLIN HARREL—"The Adequacy of Autogenous Welding for Vocational Agriculture Shop Instruction in Modern Farm Mechanization." Thesis, D. Ed., Department of Agricultural Education, The Pennsylvania State University.

SNYDER, DONALD G.—"Factors Associated with the Development of Farm Tractor and Implement Maintenance and Repair Workshops for Teachers in Pennsylvania." Paper, M.Ed., Department of Agricultural Education, The Pennsylvania State University.

STAFF.—"The Agricultural Part of the Curriculum for a Regional Center." Non-thesis study, Department of Agricultural Education, University of Connecticut.

STEVENS, GLENN Z.—"Characteristics of the Complete Programs of Local Departments of Vocational Agriculture Used for Participating Experience in Pennsylvania." Non-thesis study, Department of Agricultural Education, The Pennsylvania State University.

STEVENS, GLENN Z.—"Influence of the Participating Experience Period on Scores of Seniors in Agricultural Education on the Minnesota Teacher Attitude Inventory and the Scale for Self Appraisal of Successful Teaching." Non-thesis study, Department of Agricultural Education, The Pennsylvania State University.

STEVENS, STRATTON B.—"A Developmental Study of the Guidance Program in a Newly-formed Rural Area Joint High School with Particular Reference to Vocational Agriculture." Special Problem, Department of Agricultural Education, The Pennsylvania State University.

SULTENFUSS, VERNON B. — "What Teachers of Vocational Agriculture Like About Their Profession." Thesis,

M.S., Department of Agricultural Education, University of Maryland.

SWECKER, BAYARD L.—"Attitudes of Parents in the Harman High School Community Toward Supervised Farming Program in Vocational Agriculture." Problem, M.S., Department of Agricultural Education, West Virginia University.

TRIMM, FREDERICK N.—"Methods of Rating Winners in FFA Contests." Problem, M.S., Department of Education, University of Massachusetts.

WADE, J. FRANKLIN, JR.—"The Farm and Home Unit Approach to Extension Education." Problem, M.S., Department of Agricultural Education, West Virginia University.

WALKER, JAMES E. — "A Long-Time Plan for Vocational Agriculture in The Sistersville High School and Community." Problem, M.S., Department of Agricultural Education, West Virginia University.

WITMER, T. DEAN—The Duties and Functions of Area Advisers in Vocational Agriculture." Paper, M.Ed., Department of Agricultural Education, The Pennsylvania State University.

NORTH CENTRAL REGION

Compiled by Ralph E. Bender
The Ohio State University

ANDERSON, RONALD E.—"Contributions of Protestant Missions to Agriculture in the Philippines." Thesis, M.S., Department of Vocational Education, Iowa State College.

ANIBAL, JOHN—"How Fifty Young Farmers Became Established in Farming in Lenawee County, Michigan 1939-54." Thesis, M.S., Michigan State University.

BAIL, JOE P.—"Attitudes of Teachers and Students of Vocational Agriculture to the Role of the Future Farmers Organization." Thesis, Ph.D., Dept. of Vocational Education, Michigan State University.

BALL, WILBUR P.—"Influence of High School Vocational Agriculture on Farm Mechanics Practices Used by Participants in the Veterans Farm Training Program." Thesis, Ph.D., Department of Vocational Education, Iowa State College.

BANG, ALFRED—"A Study of Procedures and Techniques to Increase Viewer Interest in Vocational Agriculture Telecasts." Thesis, M.S., University of Nebraska.

BENTLEY, RALPH R.—"A Status Study of Supervised Farm Practice in Indiana." Staff Study, Purdue University.

BENTLEY, RALPH R., SIMPSON, ELIZABETH, AND WOERDEHOFF, FRANK J.—"An Investigation of the Attitudes of School Administrators in Indiana Toward Selected Vocational Education Programs." Staff Study, Purdue University.

BLAKE, DUANE L.—"Influence of High School Vocational Agriculture on the Rate of Establishment of Graduates in Farming." Thesis, M.S., Department of Vocational Education, Iowa State College.

BRAZZIEL, WILLIAM—"The Programs of Non-Land Grant Colleges of Agriculture in the United States." Ph.D. Dissertation, Department of Agricultural Education, The Ohio State University.

BRIDGES, LONNIE H.—"Difficulties Encountered by Graduates of Vocational Agriculture in Southeastern Ohio as They Become Established in Farming." Ph.D. Dissertation, Department of Agricultural Education, The Ohio State University.

BRIDGES, RAYMOND H.—"Occupational Patterns of Graduates of Vocational Agriculture in Southeastern Ohio." Ph.D. Dissertation, Department of Agricultural Education, The Ohio State University.

DAKAN, EDWARD E.—"Influence of High School Vocational Agriculture on Production and Management Practices Used by Graduates." Thesis, M.S., Department of Vocational Education, Iowa State College.

DAVIS, LOWERY H.—"An Appraisal by Professional Non-School Personnel of Teacher Performance in Conducting a Program of Vocational Agriculture." Ph.D. Dissertation, Department of Agricultural Education, The Ohio State University.

DAVIS, RICHMOND C.—"A Proposed Curriculum for a Five-Year Program of Agricultural Education in the Agricultural, Mechanical and Normal College of Arkansas." Thesis, Ph.D., Michigan State University.

DAVISON, CASSIUS M.—"Characteristics and Traits of Agricultural Education Majors Who Do Not Teach." Thesis, M.A., Michigan State University.

DEEMS, HOWARD—"Evaluation and Proposed Reorganization of the In-Service Training Program for Nebraska Teachers of Vocational Agriculture." Thesis, Ed. D., University of Missouri.

ESSMAN, ROLLAND—"A Study of the Summer Activities of Teachers of Agriculture in Nebraska: The Time Spent on Each Activity and An Evaluation of Each Activity." Thesis, M.S., University of Nebraska.

FOOTE, DUANE—"Factors Affecting the Use of Selected Teaching Aids in Vocational Agriculture Departments in Nebraska." Thesis, M.S., University of Nebraska.

FULTON, DAVID A.—"Effect of High School Vocational Agriculture on Achievement in the Introductory Farm Mechanics Course at Iowa State College." Thesis, M.S., Department of Vocational Education, Iowa State College.

GADDA, H. W.—"A Comparison Study of State Farmers and Non-State Farmers Regarding Their Academic Achievement." Problem, M.S., Department of Agricultural Education, South Dakota State College.

GRAY, WAYNE—"Establishment of an FFA Farm." Problem, M.S., Department of Agricultural Education, South Dakota State College.

HARPER, JAMES—"Administrative Problems Relative to the Establishment of a High School Vocational Agricultural Program." Problem, M.S., Department of Agricultural Education, South Dakota State College.

HENDERSON, EARL M.—"Influence of High School Vocational Agriculture on the Extent of Establishment of Graduates in Farming." Thesis, M.S., Department of Vocational Education, Iowa State College.

IVERS, PAUL H.—"A Program of Work for Vocational Agriculture in the Sauk Rapids High School." Thesis, M.S., The University of Minnesota.

KANTER, EARL—"An Evaluation of Professional Participation Experiences by Student and Apprentice Teachers in Ohio, 1955-56." M.Sc. Thesis, Department of Agricultural Education, The Ohio State University.

LAUBAUGH, LAVERNE E.—"An Evaluation of the Animal Science Curriculum at Illinois State Normal." Ph.D. Dissertion, Department of Agricultural Education, The Ohio State University.

LAUBIS, ROBERT—"Use of Credit by Young Farmers in Logan County, Ohio." M.Sc. Thesis, Department of Agricultural Education, The Ohio State University.

LEHR, DONALD—"A Study of the Effects of Selected Factors on Participation by FFA Members in Livestock Exhibits at Nebraska County Fairs." Thesis, M.S., University of Nebraska.

LINDENMUTH, WARD — "Occupational Status of Former Students of Vocational Agriculture in Ohio." Nonthesis, Department of Agricultural Education, The Ohio State University.

LOREEN, C. OSCAR—"An Examination of Adult Education in Vocational Agriculture in the United States." Thesis, Ph.D., The University of Minnesota.

MAGNUSON, MORRIS W.—"A Study to Determine the Importance of Pre-Service Training in Farm Mechanics Jobs in Vocational Agriculture." Problem, M.S., Department of Agricultural Education, South Dakota State College.

MATTHEWS, JOHN W.—"A Plan for Developing Teacher Education in Farm Mechanics." Ph.D. Dissertation, University of Illinois.

MCCORMICK, ROBERT W.—"Improving 4-H Junior Leadership Training in Ohio." M.Sc. Thesis, Department of Agricultural Education, The Ohio State University.

MIGHT, CHARLES—"A Study of Farm Market Reporting by Radio in the Marion, Ohio Area." M.Sc. Thesis, Department of Agricultural Education, The Ohio State University.

MORRIS, JESSE A.—"Professional Competencies Needed by Beginning Teachers of Vocational Agriculture." Thesis, Ed. D., Michigan State University.

NIELSEN, DUANE M. (Tentative Title) "Influence of High School Vocational Agriculture and Other Factors on Establishment of Graduates in Farming." Thesis, Ph.D., Department of Vocational Education, Iowa State College.

OLVER, ELWOOD F.—"Evaluation of the Farm Electrification Programs of the Electric Power Suppliers of the United States." Thesis, Ph.D., Department of Vocational Education, Iowa State College.

PFLEIDERER, DONALD—"Teaching Aids in the Attica Vocational Agriculture Department." Non-thesis, Department of Agricultural Education, The Ohio State University.

RHONEMUS, ALFRED—"Problems in Operating School-Owned Farms in Ohio." Non-thesis, Department of Agricultural Education, The Ohio State University.

RITCHIE, AUSTIN E.—"An Evaluation of the Outcomes of the Beginning Teachers of Vocational Agriculture with Some Emphasis on the In-Service Program in Ohio." Non-thesis, Department of Agricultural Education, The Ohio State University.

ROADFELDT, CLARENCE H. — "Teaching Farming Programs, Ag. I, in Monticello (Minn.) Public Schools." Thesis, M.S., The University of Minnesota.

SCHRODER, WAYNE—"Student and Parent Values of the Vocational Agriculture Teachers' Visit." M.Sc. Thesis, Department of Agricultural Education, The Ohio State University.

SICK, ALFRED—"Student Evaluation of On-Farm Visits Made by Instructors of Vocational Agriculture in District 3 of Nebraska." Thesis, M.S., University of Nebraska.

SNEPP, NEIL O.—"Educational Services Provided for Teachers of Vocational Agriculture by the Electric Power Suppliers in Ohio." Non-thesis, Department of Agricultural Education, The Ohio State University.

STEVENSON, PAUL N. — "Influence of High School Vocational Agriculture on Farm Mechanics Practices Used by Students Previous to Enrolling at Iowa State College." Thesis, M.S., Department of Vocational Education, Iowa State College.

STEWART, WILLIAM W.—"Needs and Interests of Out-of-School Young Farmers in the Postville Community." Thesis, M.S., Department of Vocational Education, Iowa State College.

STUCKEY, WENRICH, JR. — "In-Service Training in Farm Mechanics for Teachers of Vocational Agriculture in Ohio." Non-thesis, Department of Agricultural Education, The Ohio State University.

UTOFT, DONALD—"The Evaluation of the Supervised Farming Program." Problem, M.S., Department of Agricultural Education. South Dakota State College.

WALL, JAMES EUGENE — "Influence of High School Vocational Agriculture on Farm Mechanics Practices Used by Graduates." Thesis, Ph.D., Department of Vocational Education, Iowa State College.

WESTFALL, ROBERT L.—"The Use of Advisory Committees by Ohio Teachers of Vocational Agriculture." M.Sc. Thesis, Department of Agricultural Education, The Ohio State University.

WINGEN, ERNEST—"Survey of Attitudes of Parents Towards Vocational Agriculture in South Dakota." Problem, M.S., Department of Agricultural Education, South Dakota State College.

WOLF, WILLARD H.—"A Participation Experience Analysis from Trainee Travel Reports." Non-thesis, Department of Agricultural Education, The Ohio State University.

WOOD, EUGENE S.—"A Follow-up Study of Former Students of Vocational Agriculture in Illinois." Thesis, Ed.D., University of Missouri.

WOODIN, RALPH J.—"An Evaluation of Current Programs of Work of a State Vocational Association." Non-thesis, Department of Agricultural Education, The Ohio State University.

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PACIFIC REGION

Compiled by Leo L. Knuti
Montana State College

BRYAN, JAMES EUGENE—"A Study of the B.S. Graduates in Agricultural Education, University of Idaho, 1934-1954." M. Agr. Ed., Department of Agricultural Education, University of Idaho.

CHRISTIANSEN JAMES E.—"Criteria and Standards for Evaluating Programs in Vocational Agriculture." M.S. Thesis, Department of Agricultural Education, University of Arizona.

CROSS, IRVING C.—"Agricultural Skills Performed by and Their Importance to Farmers and Ranchers in Colorado." Master's Report. M.E. in Agriculture; Agricultural Education Section, Department of Vocational Education, Colorado A. & M. College.

DEVIN CARL GLEN—"Farm Shop Tool Requirements." M. Agr. Ed., Department of Agricultural Education, University of Idaho.

FERDUN, CLARENCE R. & STAFF.—"A Study of the Distribution of Vocational Agriculture Boys by Grade in School and Year in Vocational Agriculture." Hawaii.

FREEH, LAVERN A.—"Factors Inhibiting Farmers in Adopting Approved Practices in Farming." Master's Report. M.E. in Agriculture; Agricultural Education Section, Department of Vocational Education, Colorado A. & M. College.

HEIN, AUGUST—"Integration of Agricultural Science, Farm Mechanics, FFA and On-the-Farm Instruction in Vocational Agriculture." Master's Problem. Ag. Ed. Dept., Montana State College.

KENYON, HARRY F.—"The Place of Vocational Agriculture in the Minatare, Nebraska, School Community." Master's Report. M.E. Agriculture; Agricultural Education Section, Vocational Education Department, Colorado A. & M. College.

KNUTSON, ALFRED K.—"School Farms and Their Relationship to the Vo-Ag Program." M. Agr. Ed., Department of Agricultural Education, University of Idaho.

MOORE, CARLOS H.—"A Program for Vocational Agriculture in Douglas High School." Problem, M. Agr. Ed., Department of Agricultural Education, University of Arizona.

RINEBOLD, EUGENE M.—"The Success of Carl Raymond Gray Students at the University of Idaho." M. Agr. Ed., Dept. of Agricultural Education, University of Idaho.

SALMON, VINCENT W.—"An Evaluation of Community Resources for Assisting Departments of Vocational in Agriculture in Arizona." Problem, J. Agr. Ed., Dept. of Agric. Educ., University of Arizona.

SUTHERLAND, S. S. & THOMPSON, O. E. —"A Study of the Training Requirements of Workers Employed in Business and Distributive Occupations in Agriculture," Department Study, 1956 Department of Education, University of California, Davis.

SOUTHERN REGION

Compiled by T. J. Horne
Virginia Polytechnic Institute

BARRON, R. H.—"A Study of the Facilities, Management, and Production Practices of Farmers in the Clyde School District." Partial requirement, M.Ed., Department of Agricultural Education, Texas A. & M. College.

BURK, OLIVER—"Sheep Production in the Rochelle Community." Partial requirement, M.Ed., Department of Agricultural Education, Texas A. & M. College.

CUMMINS, JAMES E.—"An Analysis of the Effectiveness of Simple Poultry Nutritional Experiments as a Teaching Aid in Vocational Agriculture." Thesis, M.S., Department of Agricultural Education, East Texas State Teachers College.

DARNELL, CHARLES E.—"Developing a Program of Instruction in Farm Mechanics for Huddleston High School." Thesis, M.S., Department of Vocational Education, Virginia Polytechnic Institute.

DENNIS, HORACE C.—"Organizing and Developing an FFA Chapter in the Department of Vocational Agriculture of the Lyerly High School." Research Problem, M.Ed., Department of Agricultural Education, University of Georgia.

DOUGLAS, DAN O.—"A Study of the Agricultural Graduates of East Texas State Teachers College." Thesis, M.S., Department of Agricultural Education, East Texas State Teachers College.

FRANKS, CHARLES J.—"A Study of the School Community Cannery Program in Pittsylvania County." Thesis, M.S., Department of Vocational Education, Virginia Polytechnic Institute.

GALBREATH, THOMAS—"A Study of the Educational Needs of Young Farmers in the Eastern Part of Williamson County, Texas." Partial requirement, M.Ed., Department of Agricultural Education, Texas A. & M. College.

GRAY, GEORGE E.—"Functions of Advisory Councils to Departments of Vocational Agriculture." Research Problem, M. Agr. Ed., Department of Agricultural Education, North Carolina State College.

HAWKINS, WALLACE—"A Photographic Depiction of Steps in Care and Management of Sow and Litter." Partial requirement, M.Ed., Department of Agricultural Education, Texas A. & M. College.

HENDRICKS, BURL—"A Study of the S. C. Practices Used by Cooperators in the Menard S.C.C. District." Partial requirement, M.Ed., Department of Agricultural Education, Texas A. & M. College.

HOLLANDSWORTH, RAY L.—"A Study of the Eighth Grade Exploratory Course in Agriculture in Virginia." Thesis, M.S., Department of Vocational Education, Virginia Polytechnic Institute.

JACKSON, ROYCE—"A Study of the Personal and Social Problems of 40 Vocational Agriculture Students in Two Communities." Partial requirement, M.Ed., Department of Agricultural Education, Texas A. & M. College.

KYLE, ALBERT B.—"An Analysis of Multiple Teacher Departments of Vocational Agriculture in Texas." Thesis, M.S., Department of Agricultural Education, East Texas State Teachers College.

LLOYD, F. A.—"A Study of the Cost to the Sears-Roebuck Foundation for the District Future Farmers of America Livestock and Poultry Show Held at Dallas, Texas, 1944-1954." Thesis, M. S., East Texas State Teachers College.

MILLAN, JOSE A.—"Developing a Program of Vocational Agriculture for the Rosario Second Unit School, San German, Puerto Rico." Thesis, M.S., Department of Vocational Education, Virginia Polytechnic Institute.

MOORE, TROY B.—"A Study of the Need for Establishing Vocational Agriculture Departments in New Locations in Virginia." Thesis, M.S., Virginia Polytechnic Institute.

MULLINS, ERDMAN—"A Study of Factors Influencing Participation in the Program of Vocational Agriculture as the Basis of Developing an Adult Farmer Program in Haysi Area of Dickenson County, Virginia." Thesis, M.S., Department of Vocational Education, Virginia Polytechnic Institute.

RICHARDSON, T. M.—"Developing an Instructional Program in Social Circle High School to Help Farm Boys Increase Their Effectiveness in Producing Cotton." Research Problem, M. Ed., Department of Agricultural Education, University of Georgia.

RISINGER, JAMES R.—"A Study of the Development of Community Centers in Lamar County and Their Significance to Rural Life." Thesis, M.S., Department of Agricultural Education. East Texas State Teachers College.

ROCK, CLAUD H.—"A Study of the Farm Operation, Production, and Marketing Practices in the Eula School District." Partial requirement, M.Ed., Department of Agricultural Education, Texas A. & M. College.

ROSPRIM, LEWIS J.—A Study of the Production and Harvesting Practices Followed by 40 Rice Producers in the Eagle Lake Community." Partial requirement, M.Ed., Department of Agricultural Education, Texas A. & M. College.

RUTROUGH, JAMES E.—"Administrative Policies and Procedures for Conducting Young and Adult Farmer Programs in Vocational Agriculture in Selected School Divisions of Virginia." Thesis, M.S., Department of Vocational Education, Virginia Polytechnic Institute.

SPARKS, CLAY—"A Study of the Production Projects of 100 Vocational Agricultural Students in Montague County. Partial requirement, M.Ed., Department of Agricultural Education, Texas A. & M. College.

SMITH, REUBEN R.—"A Study of Chain-Type Projects in 25 Selected Departments of Vocational Agriculture." Partial requirement, M.Ed., Department of Agricultural Education, Texas A. & M. College.

TAYLOR, J. N.—"A Study of the Production Practices on Caged Layer Egg Production in Brazos County, Texas." Partial requirement, M.Ed., Department of Agricultural Education, Texas A. & M. College.

WENDLER, CARL—"A Study of the Water Infiltration Characteristics of Certain Soils Under Various Usages in Washington County, Texas." Partial requirement, M.Ed., Department of Agricultural Education, Texas A. & M. College.

WINSTON, A. D.—"A Photographic Depiction of Steps in Developing Producing Dairy Cows." Partial requirement, M.Ed., Department of Agricultural Education, Texas A. & M. College.

YOUNG, OREN A. B.—"An Analysis of the Coordinated Adult Agricultural Educational Program of Cass and Marion Counties in Texas." Thesis, M.S., Department of Agricultural Education, East Texas State Teachers College. □

Themes for Volume 29 of The Magazine

Your Magazine for the year beginning in July, 1956, will feature the themes listed below. Some indication of the range of problems and variety of approaches to each theme is attempted to encourage and invite you to add to this interpretation and to contribute articles appropriate to one or more themes during the year. Almost any idea around which you may build a story can be fitted into some one of the themes listed.

In addition to the theme for the month each issue will have space for the usual features of Book Reviews, News and Views of the Profession, Professional and Teaching Aids, Tips That Work, and Stories in Pictures.

Pictures are a desirable addition to any story in the Magazine if selected to illustrate an idea and if of a quality suitable for printing. Pictures for the page of "Stories in Pictures" should be supplemented with sufficient legend to get the story across to the reader.

Authors of articles who do not have a cut of their picture on file with the printer may send a picture for such purpose for use with the article. Cuts are kept on file for use with any later articles.

Remember that articles are acceptable at any time but those for any particular month must be in the hands of the editor three months before the date of publication. Articles accepted are filed for the month for which the theme is most appropriate insofar as possible.

If you have an idea of value to other teachers let them know about it in *your Magazine.*

July—*Relationships in the School and Community*—to include: Cooperation with other agencies; Fairs and demonstrations; Programs of publicity; Promoting school and community relationships; Promoting the Vo-Ag program; etc.

August—*Starting the New School Year*—to include: Organizing and filing materials of instruction; Obtaining supplies and equipment; School and faculty relationships; Organizing classes; Organizing and using advisory committees; Planning course content; Multiple teacher departments; Rooms and equipment, etc.

September—*Improving Methods of Instruction*—to include: Selecting and using visual aids; Construction and use of tests; Evaluating pupil performance; Pupil-teacher relationships; Use of field trips; Using reference materials; Lesson planning; etc.

October—*The Young and Adult Farmer Program*—to include: Recruiting classes; On-farm instruction; Planning programs of instruction; Young Farmer Associations; Evaluating accomplishments; Relationships with other agencies; Promoting the program; etc.

November—*Teaching as a Profession*—to include: Means of professional improvement; Selection of teachers; Membership and participation in professional organizations; Professional ethics; Professional relationships; Tenure of teachers; etc.

December—*Objectives in Vocational Agriculture*—to include: Meaning of vocational education; Relationships with the total school program; Aims of instruction at various levels; Effect upon selection of students; How objectives are determined; The place of FFA; Preparation for related occupations; etc.

January—*The Farm Mechanics Program*—to include: Shop facilities and their use; Courses of study for farm shop; Safety in the shop; Teaching procedures; Use of special teachers; Relationship with other Vo-Ag instruction; etc.

February—*The FFA Program*—to include: Programs of work; Financing local programs; Using contests, exhibits and demonstrations; Leadership training; Membership requirements; Relationship to the Vo-Ag program; etc.

March—*Planning and Developing Farming Programs*— to include: The place and importance of farming programs; Initiating farming programs; Financing farming programs; Supervising farming programs; Farming programs for young farmers; Records and reports; Parental agreements; Programs for non-farm boys; etc.

(Continued on page 255)

Vocational agriculture in relation to human resources in agriculture

The interpretations made will affect the directions of our efforts

H. M. HAMLIN, Teacher Education, University of Illinois

H. M. Hamlin

THE report of the Department of Agriculture on "Development of Agriculture's Human Resources" has evoked a wide variety of reactions from the members of our profession. The stand the profession finally takes regarding it will be a good indication of the maturity and depth of its members.

An excellent panel at the A.V.A. convention in December 1955 dealt wisely and maturely with the report, but most of us did not hear the panel discussion and there were important considerations which the panel lacked time to cover.

The first thing to be noted about the report is that its title is the product of the consummate philosophical error. Agriculture does not have human resources; people have agricultural resources. The title the Department chose is a clue to much of the thinking its staff has long been doing.

We who are engaged in public school education in agriculture should not follow the lead of a department of government which is concerned with agriculture as an industry, but should interpret the data included in the report with the ideals of the public school system of which we are a part as our guide.

If we follow these ideals, we shall be deeply concerned about the *people* who live in agricultural areas where incomes are low. We shall be eager to help these people to find and take advantage of opportunities to better their conditions. Some of them may find their best opportunities in the communities where they live; some may advantageously move to other farming communities; some may migrate to the cities.

What Types of Agricultural Education?

We should become more concerned than we have been regarding the provision of appropriate types of agricultural education for these low-income areas and particularly with effective education in agriculture for the adults who will probably spend the rest of their lives there. We should be interested in developing counseling programs in the schools of these areas, so that the human talents born there may be most fully used. We should encourage other types of vocational education in these schools, which will help in developing industries and businesses suited to these areas.

We should not be deluded into thinking that wholesale transfer of these farmers and their children to the cities will provide a solution. The 1950 census showed that about 3.3 million families had incomes under $1,000. Of these, 1.8 million families were in the cities, where $1,000 means much less in purchasing power than it means on the farms. There is no point in accumulating more low-income families in the cities.

There is probably far more wasteful use of labor in the cities than there is on the farms. What is the logic of reducing the farm population until some two million farm families are expected to feed the 200 millions we shall shortly have? Cannot a part of the "surplus population" on farms be used to provide an adequate labor supply for our larger farm units?

We should recognize that not all of the "submerged farmers" can be located neatly on a map, as the report locates them. The economically, mentally, and emotionally submerged are to be found in every community in which we operate. Our hearts will go out to these submerged people, wherever we find them.

Who Is to Serve?

Some have concluded that the Extension Service has been handed the job of dealing with low-income farmers because Congress gave it some funds for work with them. There has, however, been no abrogation of the right and duty of any school district, any state, or the Agricultural Education Service of the Office of Education to deal with this problem as it is able. We should seek additional funds from local, state, and federal sources, so that we can deal more adequately with these people, but it would be undesirable to ear-mark funds for this special purpose. We should use our regular funds so that we do not discriminate against the people in low-income areas.

Though low-income farmers deserve concern, they are not the only people whose agricultural education we have neglected. We should be concerned too about the young and adult farmers, the farm women and girls, the workers in agricultural occupations other than farming, the owners of farm land who do not operate it, and the citizens and prospective citizens who make our public policies for agriculture and have many other relationships to it. These too are neglected groups, numbering in the aggregate perhaps 20 times the number of low-income families.

Need for "Standing on Our Own Feet"

The principal hazard we face in dealing with the report is that many of us in the public schools are in the habit of getting our ideas about agricultural education from the Department of Agriculture and its affiliated agencies. When the people in these agencies decide to do something, we often tag along. They serve only farmers, so we confine our services to farmers. They have 4-H Clubs, so we have an FFA. They have fairs and contests; we must try for bigger and better ones. They stress publicity; we must blow our horns. They have been working with a superior group of farmers; to compete, we develop and honor the boys who have the most financial backing from their parents and the adults who respond most readily to treatment. They get excited about low-income farmers, so we get excited. If Emerson was right in believing that "imitation is suicide," we have frequently shown suicidal tendencies.

May our reaction, as a profession, to the report be one which will indicate that our thinking has matured; that we are able to take a set of facts and put our own interpretations upon them; and that we realize we are working in a special medium, the public school, which operates under a special set of ideals and employs its own special procedures. □

Themes - - -

(Continued from page 254)

April—*Enrolling Students in Vocational Agriculture*—to include: Who should enroll; Requirements in vocational agriculture; When to enroll students; The role of parents; Cooperation with the school guidance service; Kinds of information needed; etc.

May—*Evaluating the Vo-Ag Program*—to include evaluation of any phase of the Vo-Ag program—in-school instruction, individual farming programs, out-of-school groups, school and community activities, teacher-preparation programs, etc. (This issue will contain the annual listing of research studies in progress.)

June—*Conducting On-Farm Instruction*—to include: Relationship to in-school instruction; Scheduling; Time to be spent; Frequency; Methods; Records; Reporting; etc.

The Cover Picture

Although Iowa is noted for corn production, teachers of vocational agriculture also devote some attention to the oat crop. Last year vocational agriculture classes conducted 79 oat demonstration plots. Many of these class projects involved production of certified seed. The FFA members shown in the picture on the cover page are rogueing their demonstration plot near Sac City, Iowa.

A research project in Iowa has disclosed that 120 young farmers who had studied vocational agriculture in a sampling of 10 high schools are using improved practices in crop production and soil management to a greater extent than 120 young farmers from 10 similar communities which did not offer vocational agriculture. Former vocational agriculture graduates were using the improved practices to a greater extent than graduates from the control schools in 28 of 41 improved practices investigated. The higher scores of the former students of vocational agriculture were statistically significant in 6 of the practices. □

Evaluative criteria and standards for directed training centers in vocational agriculture.

Training environment affects the product

R. W. CANADA and J. E. WOODHULL, Teacher Education, Colorado A & M College

R. W. Canada

AN increasing awareness is growing among state supervisors and teacher trainers as to the extremely important part that supervising teachers play in the training program of prospective teachers of vocational agriculture. The participation experience phase of their training is the bridge that spans the resident on-campus teacher training and the trainee's entry into his first job as a beginning teacher. In a sense, the work done by the supervising teachers during the participation phase of training is a crowning benediction to on-campus training. It is here that the trainee gets to try out his preparation and skill for the first time. The situation in which the trainee finds himself during student teaching will determine his future attitudes, ideals and standards of performance. To a large extent, he will emulate his supervising teacher in the conduct of the program in his own department later. For this reason it is imperative that the best possible training situation should prevail in the training centers regarding the qualifications of the supervising teacher, the school and its administration, the vocational agriculture facilities and the program in operation.

J. E. Woodhull

Needs for Standards

Often the supervising teacher and the school administration are not fully aware of the standards desired for the best possible training situation for the directed training center. Experience indicates that, in general, supervising teachers and administrators both are eager to develop and improve the situation in the training center in order to provide the best possible training environment. Any criteria or standards developed for the training center should be fully understood by the supervising teacher and the school administration relative to the cooperative training program and they should participate in its development.

It was with this thought in mind that the following evaluative criteria were developed for use by the supervising teacher and school administration in evaluating their training situation. Using these criteria for self evaluation they are able to arrive at a rating for their own situation. This rating will reveal areas of strength and weakness and will allow the cooperating parties to work mutually in improving these deficient areas. The following criteria are an initial attempt to develop a usable and effective evaluative procedure. □

Evaluative Criteria and Standards for Directed Teaching Centers in Colorado

	Rating Scale					*Total Score*
	0	5	10	15	20	
A. *Criteria for teachers*						
1. The teacher is fully qualified and holds a vocational certificate valid in Colorado						
2. The teacher has a Master's degree or is pursuing graduate study leading to the Master's degree						
3. The teacher devotes full time to all-day and out-of-school classes						
4. The teacher is a leader in professional meetings of vocational educators and his peers in education						
5. The teacher is interested in, cooperative with and sympathetic toward the enrichment of the program of teacher training in agricultural education						
6. The teacher is well established in his school and community and in his program but not involved in out-of-school activities that are a hinderance in doing an adequate job with the student teachers						
7. The teacher is an accepted, respected and cooperative member of the high school staff						
8. The teacher cooperates with the U.S.D.A. extension and other services of his area						
B. *Criteria for the School Administration*						
1. The administrative head and the school board are willing for the teacher of agriculture to participate in the training of teachers of agriculture						
2. The administrative head and the school board accept vocational agriculture as an integral part of the public school program and favor instruction for both all day and out-of-school classes						
3. The administrative head and the school board favor the organization and functioning of an advisory council for vocational agriculture						
4. The administrative head and members of the school board visit some of the supervised farming programs of vocational agriculture students						
5. The administrative head and the school board provide an adequate budget for the conduct of a complete community program of agricultural education						
6. The administrative head and the principal supervise periodically the activities of the teacher of agriculture and the trainees						
C. *Criteria for the FFA Program*						
1. The Chapter enjoys enthusiastic member participation						
2. The Chapter holds monthly meetings throughout the year and meetings are scheduled so that members can conveniently attend						
3. The Chapter has a written program of activities which is developed on a yearly basis by the members						
4. The Chapter has committees functioning for each activity or group of activities including an executive committee which meets regularly						
5. The Chapter records for the secretary and treasurer and the annual reports are complete and accurate						
6. The Chapter presents the current program of activities to the administrative head of the school for his information and approval						
7. The Chapter maintains a posted current record of Chapter accomplishments for all members to study						
8. The Chapter seeks council from the advisory council for vocational agriculture and keeps this council informed of the Chapter activities						
D. *Criteria for the Department Organization*						
1. A community program of agricultural education which includes a course of study for all organized classes is on file						
2. There is a three-year program, as a minimum, offered for all-day students						
3. There is a functioning advisory council which meets regularly						
4. There is an adequate budget of departmental expenses on file and is available for study by student teachers						
5. There is in use both the standard and general filing systems recommended for vocational agriculture departments in Colorado						
6. There is an adequate library of reference books, bulletins, charts and films properly filed for ready accessibility						
7. There is some specific basis of selection of enrollees into classes of vocational agriculture						

(Continued on page 257)

Evaluative criteria and standards - - -

(Continued from page 256)

	Rating Scale					Total Score
	0	5	10	15	20	
E. *Criteria for Agricultural Mechanics*						
1. There is in use a system for monitoring the agricultural mechanics shop cleanup and maintenance						
2. There is in use shop record cards which are coordinated with the agricultural mechanics course of study						
3. There is in use a system of color dynamics as part of the shop safety program						
4. There is a comprehensive shop safety program being followed as evidenced by the presence of fire extinguishers, fire blankets, first-aid kits, posters, safety rules posted at machines, tests given and filed, etc.						
5. There is an adequate number of hand and power tools for doing the jobs which should be done by the students enrolled						
6. There is evidence that students enrolled are developing farm shops at their homes						
7. There is at all times in the agricultural mechanics shop under construction or repair practical shop projects for student teachers to observe and supervise						
F. *Criteria for Supervised Farming Programs*						
1. There is being used by each student the Colorado Record Book and this record is complete and up-to-date						
2. The Colorado Activity Handbook is being used by each student and this record is complete and up-to-date						
3. There is a summary record of the farm-home background for each all day and out-of-school student which is available for student teachers to study						
4. There is complete for each student, in his record books, a preliminary plan, an enterprise analysis, a listing of approved practices, and job planning on a seasonal basis for each student's farming program						
G. *Criteria for Young and/or Adult Farmer Classes*						
1. There is at least one young or adult farmer group organized and holding scheduled meetings periodically throughout the year						
2. There is provision made for the young and adult farmer groups to be self-perpetuating by the election of president, secretary, program committee, etc.						
3. There exists the practice of assigning one or more young farmers or adult farmers to student teachers with whom approved farming practices are initiated and carried through to completion						
4. Provision is made for each student teacher to direct instruction in one or more units for young or adult farmers						
H. *Criteria for Group and Individual Instruction*						
1. The units of instruction are developed on a problem basis and directly concerned with supervised farming, Chapter activities or local community problems						
2. The units of instruction are fully planned in the form of written lesson outlines which may be studied by student teachers						
3. The units of instruction are designed to utilize several teaching tools, such as: demonstration, conference procedure, visual aids, discussion						
4. The units of instruction are designed to permit each member time to define the problem, set objectives, solutions, plans of action and to participate sometime during the teaching of the unit for example: make report, serve on panel, demonstrate, serve on committee, act as chairman						
5. The units for individual instruction come from the enterprise analysis made by the individual students as listed in his record book and taught seasonally						
I. *Criteria for the Facilities of a Vocational Agriculture Department*						
1. The shop is adequate in space to provide approximately 100 square feet of floor space for each student in the largest class						
2. The shop is adequately equipped and lighted to carry on a modern program of farm mechanics						
3. The shop storage space is adequate to house supplies, student materials, etc.						
4. There is a door into the shop which is at least 12' x 12' in dimensions						
5. The shop is available full time for Vo-Ag work						
6. The classroom is of sufficient size to provide at least 35 square feet of floor space for each student in the largest class						
7. Classroom storage is adequate to house necessary teaching materials						
8. The classroom is adequately equipped with filing facilities, cabinets, study tables, chairs, etc., for the enrollments involved						
9. The classroom is available full time for vocational agriculture work						
10. The classroom, office and storage are attractively decorated						

Evaluation - - -

(Continued from page 243)

here and defined in terms of the behaviors to be expected. Second, the kinds of evidence to be used in observing the behaviors, and the methods to be used in getting such evidence must be identified. Here the greatest variation is not only permissible, but desirable. Not only test scores, but anecdotal records, personal interviews, and notes on social interaction are valuable. Generally speaking, this is a case of "the more the merrier."

Recently a group of graduate students in preparation for a series of classroom visits, the purpose of which was to study the professional accomplishments of the teachers in charge of the classes, agreed that they should be able to observe:

1. That "educational diagnosis" has taken place—It should be evident that both methodology and curriculum are varied to suit the class group as well as individual differences in the class.
2. That learning materials are purposefully organized and varied in nature.
3. That there is a sympathetic and psychologically sound motivation and direction of learning—toward development of "good" values in students.
4. That teacher and learners cooperatively venture to evaluate what has been accomplished—in *this* lesson and for *this* individual.
   a. Finally, of course, the assembled records and results must be interpreted in light of the original objectives, and it is important that this is done cooperatively with both supervisors and teachers or teachers and students participating fully.

Evaluation as a movement in education, then, is a process of systematic and continuous judgment, not only of quantity achievement, but also of the development in learners of the values in terms of which accomplishments and outcomes must be decided. It is a good sign that an issue of our professional magazine is being devoted to reports of the application of this process to the different phases of the program in agricultural education. □

Money Available for a College Education

There is more than 42 million dollars in loan funds available for college students, according to a survey made by *Changing Times, The Kiplinger Magazine*. About half of this amount is never used, although it is available at reasonable rates of interest to any willing student.

Student loan funds are available in about two-thirds of our universities and colleges at interest rates that average about 2% while the student is in college and about 4% when he graduates.

Information about loan funds usually can be obtained by writing to the Director of Admissions of the college the student wishes to attend.

An important problem of teachers is soundly treated. There are implications for your guidance opportunities.

Maintaining good relations between farm mechanics and and industrial arts

HAROLD M. BYRAM, Teacher Education, Michigan State University

Harold M. Byram

THE success of any local program of vocational agriculture is dependent in part upon how well it fits into the total program of the school. Good relations must be developed and maintained with other departments, including those in other areas of vocational education, and in the practical arts. Teachers of vocational agriculture and of homemaking have reported many types of cooperative relationships and correlation of their instruction at the secondary and adult levels. Many reports have been given about their cooperative and joint programs. Very little has been written about relations between vocational agriculture and industrial arts, although teachers and administrators are increasingly giving much thought to them. This article will deal with the genesis of the problem, the objectives of the two programs, an analysis of the problem, and suggestions for good relations.

Genesis of the Problem

Industrial arts has emerged from an original status of uncertainty to its present recognition as an important part of general education. Its antecedents—referred to first as "manual training," later as "manual arts," and sometimes as non-definitive "shop work"—were identified with the psychology and educational philosophies of the times. "Training of the hand" was at one time held to be a major outcome. Some have believed that exercises in woodworking and other activities developed general traits and abilities useful in any of life's activities. Others have thought that work in a shop would prepare pupils for the work of the world.

Instruction in the mechanical aspects of agriculture began as farm shop rather narrowly conceived, in which pupils did work similar to what was done in the course then known as manual arts, except that they worked on projects of the farm. Today, farm mechanics includes farm shop as only one of six major areas.

Changes in Schools

Important changes affecting public schools have a bearing on these two programs. The past three decades have seen school districts in rural communities increase in size through reorganization and/or annexation. Along with this growth the curriculum of the secondary school has expanded, resulting in many and varied laboratories and shops, and a pupil population increasing in diversity of interests and needs. During this time the length of the school year and the length of school life of typical pupils have increased. The pupils we have in our schools today would have dropped out to go to work in the earlier days. Activities in today's school shop appeal to them.

Changes in the World of Work

The increasing importance of industry in our economy is well known to most teachers. The proportion of the labor force employed in manufacturing is over one out of four and in many communities is much high than this. The introduction of automatic machinery is resulting in displacement of the worker who possesses little or no skill, and it is increasing the need for skilled workers in maintenance and repair. More and more operations are being performed by machines. Today an understanding of the impact of technology upon industry, business, agriculture, and the home is becoming recognized as an essential attribute of an educated person.

We are experiencing a "do-it-yourself" movement. This inclination to make and repair things stems not alone from increased leisure time and the high cost of employing tradesmen, but also from the development of new kinds of tools and machines. New materials and prefabricated kits are available to be used in the home and the home workshop.

Confusion in Objectives

In the face of all these developments it is not surprising that the public has often been confused as to the objectives of instruction in a shop or in several shops that may, in outward appearance, seem very similar. Many parents have the notion that a boy working in a shop must somehow be acquiring occupational skills. Some may also have a feeling that instruction in the class in vocational agriculture should be equally valuable for most pupils, regardless of occupational goal.

This confusion about objectives also is found among educators. Teachers of industrial arts often do not understand the objectives of vocational agriculture. They do not realize that the teacher must keep uppermost in his mind the responsibility for developing abilities needed for success in farming. Teachers of agriculture, have been schooled in principles of vocational education. They sometimes are prone to judge what they see going on in the classes in industrial arts on the basis of these vocational principles, rather than in the light of the true functions and purposes of instruction in industrial arts. In schools where a program of industrial arts is weak or non-existent, the teacher of agriculture may be apt to fall into the error of thinking that the instruction he gives in farm mechanics will meet all the needs for instruction in things mechanical for the boys under his direction.

This view appears to be condoned by some persons in positions of leadership in the profession. For example, one writer makes the statement, "It makes not one iota of difference whether . . . (the boy) learns to use the handsaw on the hog house, the end table, or the hay rack."[1] The article lays stress on the needs of youth for development of facility with tools. The writer makes no mention of industrial arts in this connection, and thus appears to be holding that the values of industrial arts courses could be obtained through instruction in farm mechanics.

Cases could be cited of teachers of agriculture who feel that a boy should choose *between* industrial arts and farm shop—that the two compete with each other. Some may also think of industrial arts as only a high-school program, rather than one that also has a place in the elementary school and in adult education.

Some of these misunderstandings or misconceptions come to a head in smaller schools which do not have separate shops for industrial arts and for vocational agriculture. In a realistic approach

[1] Kenneth L. Russell, "Where Are We Going With Power Tools?", *The Agricultural Education Magazine*, 27:148, 154, Jan. 1955.

Roy Wallis, Teacher of Agriculture (left) and Howard McDonald, Teacher of Industrial Arts, Durand, Michigan holding one of their frequent conferences on relations between industrial arts and farm mechanics.

to school administration it must be recognized that if both programs are to be provided in smaller schools separate shops cannot be justified. There must be a sharing of facilities and/or equipment in many schools. An understanding of the objectives of vocational agriculture and industrial arts should help to facilitate this sharing.

The Objectives of Farm Mechanics in Vocational Agriculture

The objectives of vocational agriculture have been well stated many times in this Magazine and in the literature on the subject, and will not be repeated here. The important point is that the aim is the development of effective abilities in the occupation of farming. So the objectives of instruction in farm mechanics relate to those abilities of a mechanical nature. Farm mechanics covers farm shop, farm machinery and equipment, farm buildings and conveniences, soil and water management, rural electrification, and farm processing equipment. Surveys of farmers and analyses of these areas reveal specific farming abilities needed by a successful farmer. When instruction in farm mechanics is evaluated the evidence of attainment of these abilities by pupils should dominate the evaluation.

The Objectives and Types of Activities in Industrial Arts

One authority defines industrial arts as "those phases of general education which deal with industry—its organization, materials, occupations, processes, and products—and with the problems resulting from the industrial and technological nature of society."[2] The Industrial Arts Policy and Planning Committee of the American Vocational Association has sponsored the preparation of a bulletin listing nine suggested objectives which might be considered by the industrial arts teacher, in setting objectives for a local program based on needs and interests of students and in the light of his own philosophy of general education:[3]

1. Interest in Industry. To develop in each pupil an active interest in industrial life and in the methods and problems of production and exchange.
2. Appreciation and Use. To develop in each pupil the appreciation of good design and workmanship and the ability to select, care for, and use industrial products wisely.
3. Self-realization and Initiative. To develop in each pupil the habits of self-reliance and resourcefulness in meeting practical situations.
4. Cooperative Attitudes. To develop in each pupil a readiness to assist others and to join happily in group undertakings.
5. Health and Safety. To develop in each pupil desirable attitudes and practices with respect to health and safety.
6. Interest in Achievement. To develop in each pupil a feeling of pride in his ability to do useful things and to develop worthy leisure-time interests.
7. Orderly Performance. To develop in each pupil the habit of an orderly, complete, and efficient performance of any task.
8. Drawing and Design. To develop in each pupil an understanding of drawings and the ability to express ideas by means of drawing.
9. Shop Skills and Knowledge. To develop in each pupil a measure of skill in the use of common tools and machines and an understanding of the problems involved in common types of construction and repair.

Courses in industrial arts are available to boys in all schools offering such a program, and to girls in many of them. Instruction is offered in many elementary schools. It is estimated that over 50 per cent of all junior-high-school pupils in the United States are enrolled in industrial arts classes. At the senior-high-school level advanced courses are offered on an elective basis. They center around significant aspects of manufacturing and construction industries and their effect on daily living. In these courses youth learn about materials, and how they are used in consumer goods through planning, producing, servicing, and repairing. In addition, they learn principles in the use of tools, processes, mechanics and design. "The areas generally recommended are woods, metals, graphic arts, electricity and radio, plastics, transportation and power, leather work, and ceramics, with drawing and planning included in all of them as needed."[4]

The Exploratory Opportunity

The type of organization preferred by many teachers, particularly in smaller schools, is the general shop. The general shop provides a flexible arrangement for a variety and sequence of activities. Exploratory experiences can be provided particularly at the junior-high-school level. Some specialized activities to meet pupil interests can be developed at the senior-high-school level. The general shop is similar in one respect to the school farm shop in that it provides for a variety of activities. The objectives of the instruction in it, however, are different from those of farm mechanics.

Since evaluation of instruction in any course should be based upon the objectives of that course, we would expect evaluation in industrial arts to stress certain outcomes not emphasized in vocational agriculture. Interests, attitudes, and habits developed will be noted as evidence of learning. Teachers also will note evidence of pupil progress toward vocational choice and of adjustment to an industrial working environment. They will be interested in the growth of pupils in those attributes of well-adjusted youth that we want in our future citizens.

Specific Problems Calling for Study

The problems calling for study by teachers of industrial arts and of vocational agriculture may be grouped into two areas. The first of these that will be mentioned might be termed guidance and curriculum. Several questions arise. Two of these are: (1) Who should be enrolled in industrial arts? (2) Who should be enrolled in vocational agriculture?

Who Should Be Enrolled

Speaking of pupils in grades nine through twelve we would say that *any* pupil should be enrolled in industrial arts, since it is a part of general education. This would include those who aspire to higher education and preparation for a profession, and to girls and boys with well-formulated occupational goals who may be con-currently or subsequently enrolled in high school courses for specific vocational preparation.

Vocational agriculture s h o u l d be limited, on the other hand, to pupils who have an interest in the work of the farm and who have available, or who can be provided with opportunities for engaging in activities of the farm. Since some basic instruction could profitably be given for certain related occupations in agriculture if these involve "the work of the farm," pupils interested in any one of these occupations could also be enrolled. We would hope that every high school might, in addition, provide a course in non-vocational, or general agriculture to be available to all pupils as a part of their general education. But it would be a mistake to attempt to provide instruction of a general, or practical arts type in a course intended for pupils whose objectives are primarily vocational in character.

How many courses should be taken? In the case of industrial arts we should not place any limit on the number, provided that courses in other areas of general and vocational education taken are sufficient to provide instruction for the all-around development of the individual. Pupils should be permitted and encouraged to continue enrollment in courses in vocational agriculture so long as they are making progress toward their vocational objective in agriculture.[5]

Industrial Arts and Vocational Preparation

To what extent should farm mechanics and industrial arts contribute to vocational education in industrial occupations? There are a few occupations for which instruction in farm mechanics could provide some basic instruction. These would be in the field of sales and service of farm equipment and machinery. The specific training for a particular occupation, however, will ordinarily have to be provided through higher education, or on the job through a cooperative training program of work experience. Industrial arts should not be expected to provide specific training for any industrial occupation, although in-

[2] Gordon O. Wilber, *Industrial Arts in General Education*, Second Edition, Scranton, Penna., International Textbook Co., 1954, p. 2.

[3] *A Guide to Improving Instruction in Industrial Arts*, Washington, D. C., American Vocational Association, 1953, p. 18.

[4] Harold M. Byram and Ralph C. Wenrich. *Vocational Education and Practical Arts in the Community School*, New York, The Macmillan Co., 1956, p. 257.

[5] For any acceptable elaboration on this point as it refers to farm mechanics see: George W. Wiegers, "A Frame of Reference in Farm Mechanics." *The Agricultural Education Magazine*, 27:43-46. August, 1954.

terests in some industrial occupations could be explored and a few basic abilities could be developed. There should be a close coordination between industrial arts and vocational industrial education programs carried on either through day trade courses or through cooperative training programs. Teachers of industrial arts and teachers of agriculture should be in a position to recommend pupils for enrollment in such programs.

Sharing Facilities

Problems of operation arise in any situation where shop facilities and/or equipment must be shared by both teachers. Some tools and equipment used by the teacher of industrial arts are not needed by the teachers of vocational agriculture, and the reverse is true. Work benches, power tools, and some hand tools might need to be used by classes in both departments in smaller schools.

The method of storage of tools sometimes presents a problem. Teachers of agriculture generally prefer decentralized storage in tool cabinets or panels. The trend in industrial arts, particularly in general shops, is also in this direction. Where teachers of industrial arts prefer centralized storage of tools or where this method of storage is traditional in the school, the problem will need to be carefully studied in order to find a solution that will be acceptable to both teachers. The responsibility for the care and upkeep of these tools should be definitely agreed upon. Teachers should follow the same practices with respect to safety, instruction in the use of power equipment, and servicing of tools and equipment. If they do not, embarrassment, confusion, and dissension might result.

The practices with respect to shop housekeeping may present a problem. There is no reason, however, why agreement cannot be reached as to the practices that would be followed by all classes.

The scheduling of classes in a shop that is shared presents a particularly difficult problem. If farm mechanics is taught in such a way as to be a part of every course in vocational agriculture it is obvious that only part-time rather than full-time use of the shop will be characteristic of the farm-mechanics schedule. The industrial arts classes, on the other hand, will make almost full-time use of the shop during the hours scheduled. Teachers of vocational agriculture should avoid a schedule that might result in the monopolization, over a long period of time, of large areas of the floor space of a shop by projects on which pupils do not work daily.

Suggestions for Teachers of Vocational Agriculture

While the preceding discussion relates particularly to situations where a shop and/or equipment are shared, the teacher of agriculture in any school could do much to foster good relationships between these two departments and thus help to improve instruction in both. Some of the suggestions which follow have been carried out by teachers with whom the writer has worked. Others are prompted by situations encountered or reported by teachers, or have been suggested by school people.

The teacher of agriculture should take every opportunity to acquaint the teacher of industrial arts, the principal, and the school counselor with the farm mechanics phase of the program. Many teachers of industrial arts have received their professional preparation in institutions which do not prepare teachers of vocational agriculture and have had little or no opportunity to gain an understanding of the objectives and programs of vocational agriculture. They may have attended a high school, and may have done student teaching in a school that did not maintain a department of vocational agriculture. The same may be true of the principal, the superintendent, or the school counselor. These school people could be invited to go on farm visits, to attend FFA meetings, and to visit classes in farm mechanics. Faculty meetings and staff committee meetings present opportunities for explaining the program in farm mechanics.

Solve Problems Through Conferences

In some schools regular meetings are held by the teacher of industrial arts, the teacher of agriculture, and the high school principal or superintendent. If the school has a local director of vocational education and practical arts, he will meet with these teachers. Problems we have discussed here could be dealt with in meetings such as these. The purpose of these conferences should not be only to settle points of disagreement. They should be made mutually helpful to all concerned.

The teacher of industrial arts has had experience and professional education that will make him particularly valuable as a consultant on problems encountered. An example is the selection of certain tools and equipment, and supplies.

The confidence and respect of the industrial arts teacher is something to be sought and developed. Good shop organization and management will contribute to this confidence, as will also the development and maintenance of high standards of work. The fact that boys in farm mechanics may be using rough materials or constructing equipment for use on the farm rather than in the home is no excuse for tolerating slipshod methods or shoddy work.

Cooperation Instead of Competition

Teachers of vocational agriculture should manifest an interest in the industrial arts program and should do what they can to help build adequate programs of industrial arts. One teacher with whom the writer worked was especially concerned with the large enrollment which he had in vocational agriculture, coupled with the lack of any prospect for the addition of a second teacher in the program. As the problem was analyzed, it was discovered that a number of boys were enrolled who had only a mild interest in agriculture and unsatisfactory facilities for farming activities. It was further brought out that there was no shop in the school and no program of industrial arts or any other practical arts or vocational courses open to boys. As the problem was further analyzed it became apparent that some boys had been enrolling in vocational agriculture "by default." It may well be that this teacher could improve the integrity and effectiveness of the program in vocational agriculture as much by encouraging the development of other programs of vocational education and practical arts—including general agriculture—as by any other way. Teachers of agriculture should work with other teachers and administrators in studying the interests and needs of the community for vocational education and practical arts, and should help in any way that they can to develop complete programs in these areas.

We must remind ourselves that boys enrolled in vocational agriculture are likely to be just as much interested in hobbies and recreational activities in the area of industrial arts as are any other pupils. This does not imply, however, that making gifts out of plastics, fabricating fly rods, or building a cedar chest are suitable projects for the school farm mechanics shop. By the same token, the fact that a pupil enrolled in industrial arts is a farm boy does not imply that all projects worked on in that course should have a useful application on the home farm. What we are saying is that each teacher should respect the objectives and nature of each other's courses and should avoid duplication or competition. Teachers of vocational agriculture usually hope that their pupils will develop home farm shops where they could continue to do much of the work of a farm-mechanics nature that they are learning to do. It is also the hope of the industrial arts teacher that boys will acquire tools and work with materials at home to further develop hobbies, and in other ways, to develop good use of leisure time. To do this it would be illogical to expect that the farm boy would set up two different home shops, one for his farm-mechanics activities and the other for personal use. Rather, by working in cooperation, the two teachers could encourage the development of home shops that could be used for any kind of mechanical work that the boy and his family need or want to do.

Above all, what is needed in both programs—industrial arts and vocational agriculture—is a disposition toward cooperativeness, a willingness to see the point of view of the other fellow. We need teachers who are interested in youth, not just in a predetermined or preconceived program. Let us, as teachers of agriculture, develop a genuine interest in the practical arts, and particularly in industrial arts; and let us become well acquainted with the objectives and nature of a good, modern program of industrial arts. Let us also acquaint all teachers with the vocational needs of farm boys and with how a good, modern program of vocational agriculture, including farm mechanics, is meeting these needs. □

....Tips that work . . .

For Better Pictures

Near the end of last August I noted a brief news item in the *New York Herald Tribune*. It stated that Argus Cameras, Inc. was launching a program to aid photography in the high schools by offering free the "Argus School Camera Kit" upon application.

My letter of inquiry brought a form which I promptly completed and returned. The week before Christmas I received, for my agriculture department, three excellent Argus cameras, each with its flash attachment and leather carrying case. Two are Argus Super 75's and the third is the superior 35mm. known as the Argus C-3.

Study of the booklet accompanying each camera and the instruction sheet with the film I bought gave material for an agriculture job on nomenclature and use of the Argus 75's.

A waiting list of our Future Farmers was set up, with priority given to seniors, and the two Argus 75's are loaned in turn, upon receipt.

The more complicated Argus C-3 is receiving my careful study, and for the present at least, will be kept in the agriculture department and used under my supervision.

The acquisition of these cameras for our agriculture department fills a long felt need. Conflicting demands for our school's camera result sometimes in its non-availability when there is need to take pictures of projects, field trips, educational exhibits, Green Hand initiates, their sophomore counterparts, the Young Dairymen, and crop demonstrations.

We plan progress photos of livestock growth against a homemade portable grid to be hung behind the calves and yearling heifers. Photographs will be used also to identify Holsteins for registry. As a matter of fact, the possibilities are many and all tend toward better teaching and morale boosting.

The forms Argus send suggest that principals sign for the camera kit. However, it seems permissible to sign with your titles, "Vo-Ag instructor and FFA advisor." If you receive the cameras I think you and your boys can use them very effectively to show progress in your department and on the farms of your boys.

The Argus Company's expectation is, of course, that use of these fine cameras by our Future Farmers in classrooms and on farms will result in greater sales. Everyone seems to benefit.

May I suggest that you write for this excellent equipment to:

Mr. Robert Wilson
Educational Services Division
Argus Camera, Inc.
Ann Arbor, Michigan.

G. H. Salisbury
Vo-Ag Instructor
Sidney, N. Y.

Using Hotdogs and Hamburgers in Teaching

To most people, a hotdog or hamburger is something you buy at Coney Island or the old ball park but to the FFA members of the Ray Chapter in Moodus, Connecticut, they can be worthwhile products marketed by Vo-Ag students.

How did all this come about? Recently, the state extension service planned a field day at the Sherwood Cone farm in East Haddam to view Cone's new pole barn and milking parlor setup. The Vo-Ag boys, through their Future Farmer's of America organization, were asked to help park cars as a service project. But the boys with a keen eye on their treasury, wanted to do more. Farmers have to eat, so they obtained the hamburger and hotdog concession for the event. The idea behind the whole operation was the experience of selling produce in a stand as well as the marketing of products from American livestockmen. Armed with chainsaws, axes, nails, hammers, griddles, knives and what have you, the boys whipped up a refreshment stand in short order. When the day was over, the FFA boys had sold over twenty five pounds of hamburger and hotdogs, earned themselves some money for their treasury, obtained some valuable business experience and helped sell the products which originated on livestock farms.

The project in operation. Cooperation begins to pay dividends. Vo-Ag instructor Steiner (between the two Chapter members) looks on approvingly.

By
Robert J. Steiner
Vo-Ag Instructor
Nathan-Hale-Ray School
Moodus, Conn.

Exchange of Ideas Contest*

REGION I

Point System for State Farmers

State Farmer applications and selections based on a point system.

How It Works

Points for every phase of the project be allocated on the basis of the value that phase of the program has on establishment and farming accomplishments.

Examples:

Feeder pig project	10 points
Sow and litter project	30 points
Purebred sow and litter project	40 points

Income and profit given weighted points.

Leadership and other agricultural accomplishments be set up in the same way. More point values given for more important offices held and leadership assumed. Credit given for all phases of vocational agriculture on the point score card.

The points verified by instructors, backed up by the record book and reviewed by the past state farmers and American Farmers and state FFA Executive Committee.

Idea came from:
Calvin Crandall, Idaho
Submitted by:
Walter Baumgartner, California

* * *

REGION II

Picture Display

An attractive, colorful display of twenty-four 35 millimeter slides of FFA activities can be easily made for the Vo-Ag classroom at a cost of less than $5.00 according to E. H. Muncrief, vocational agricultural instructor from Marlow, Oklahoma.

A box two feet square and six inches deep is constructed with a plywood bottom. A fluorescent bulb eighteen inches long is placed in the bottom of this box. A piece of glass is then placed on top of the box as a lid. Strips of black masking tape are placed on this glass in both directions so that two-inch squares are made. (See sketch, p. 262.)

Colored slides taken of students' FFA farming programs and shop projects are placed on the squares and another piece of clear glass is placed on top as a cover.

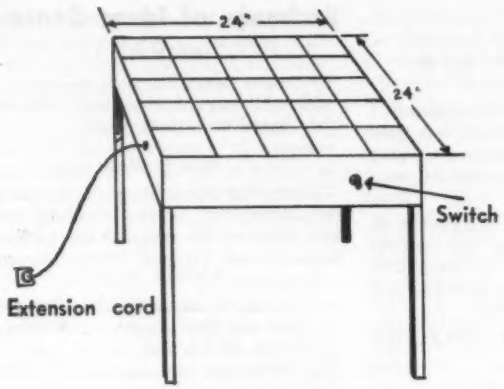
A switch installed on the front can be used to illuminate the display. The box is mounted on four legs and may be placed near the bulletin board in the classroom.

I feel this is a good idea, as I will be able to display slides that are now laying at home in a box. By changing some of the slides each week it will always be a center of attraction, as well as suggestive and a motivation factor for new students. I'm going to use it.

Submitted by:
William D. Smith
Salina, Kansas

(Continued on page 262)

* Reported here are the "winning ideas" in the N.V.A.T.A. contest for 1955.



Picture Display Sketch

REGION III

Promoting Milk Consumption

During the convention, I was talking with Lowell Peckham, Vo-Ag instructor from Walton, N. Y., regarding FFA community and fund-raising activities. He told me of this idea.

The boys in his Chapter were very concerned (being in the middle of the New York-New Jersey milk shed) about the falling price of milk. In class they learned that consumption of milk in fluid form was a good means of keeping the price of milk up. They decided to sell milk in their classroom, and proceeded to purchase an old refrigerator for $10.00 and paint a sign on it to "Drink Milk!"

This past year they earned enough from the sales to send two boys to the National FFA Convention in Kansas City. They are very pleased with the project. They have now installed a freezer and are selling ice cream, too.

They feel very pleased over the activity. They are serving the dairymen in the community by disposing of a considerable amount of milk in fluid form on the local market, they are also helping to dispose of surplus milk in the form of ice cream, two boys are able to go to the National FFA Convention who would probably have to stay home otherwise, and they are providing healthful, appetizing refreshments between the passing of classes to growing young people who formerly were drinking soft drinks.

I believe this idea could be used not only in my own, but in hundreds of other Chapters in the U. S.

Submitted by:
Vernon Bachmann
Holdrege, Nebraska

* * *

REGION IV

Make the FFA Camp a Good Leadership Experience

In Ohio we are always attempting to improve the quality of leadership of FFA boys. One area designed to improve this is the FFA Camp held at Camp Muskingum near Carrollton. Here the Camp emphasizes cooperation, recreation and conservation with leadership and other areas of the FFA program receiving secondary attention. At least, it is secondary compared to the State FFA Camp held by the Missouri FFA.

Missouri's FFA Camp emphasizes *leadership training*, with all other areas of the FFA Camp program receiving secondary attention.

Here's what they do that could be used in Ohio:

They have a camp period six days in length. The FFA boys attending must be accompanied by their teacher and under his supervision at camp. The boys are divided into groups of ten, each representing ten different local Chapters in each group. Each day an hour and a half is devoted to an exchange of ideas for improvement of their local programs of work. Each boy is provided with a blank program of work which has all headings in it and as suggestions for Chapter activities are given, they are entered in the program.

General sessions are provided dealing with "Why Have a Program of Work, Its Purposes, etc." State officers visit each group and make suggestions and provide guidance.

After each group of about ten has met and developed an area in the program of work, reports are given to a general assembly of the campers.

Prizes are given to boys with most suggestions.

I think development of a program of work by a boy containing ideas from all over the state would help tremendously to improve local FFA programs and that this idea of placing the greater emphasis on leadership might be used to great advantage in Ohio.

Idea came from:
Kenneth Lewis
Centralia, Missouri
Submitted by:
Paul Struewing
Tipp City, Ohio

* * *

REGION V

What Are You Going to Do With Your Classes While Attending the National Convention?

This is a question asked by each Principal when a teacher asks permission to attend the convention. Robert Jewell, incoming President from Michigan, gave me this idea.

He asked a representative of the various farm organizations in his community to handle his classes one day. A list of the farm organizations in my community are as follows:

1. Farm Bureau
2. Soil Conservation
3. Farm and Home Administration
4. County Agent
5. Agricultural Stabilization, Conservation
6. District Forestry
7. Feed Dealer
8. Farm Machinery

If I had thought of this idea before leaving home and prepared my students on each subject before leaving home, designating one student in each class to be responsible for projectors, another introducing speaker, etc., they would have received more valuable training and better information. The Principal could drop in and see that the classes were well organized and that the students were receiving material which was practical and needed on the farm.

Submitted by:
J. H. Mobley
Winterville, North Carolina

* * *

REGION VI

Organizing a Farm Safety Program With In-School Vo-Ag Boys

In recent years farm safety has become an issue of utmost importance. Because of the numerous number of accidents that occur on American farms annually, of which approximately 25 per cent are fatal, the National Safety Council has stressed the importance of correcting hazardous conditions that prevail. It is my thinking that instructors of vocational agriculture can do more in complying with the request of the National Safety Council than any other one professional group.

In my department I have stressed the importance of safety measures in the school farm shop and on the farm. However, until I conversed with an N.V.A.T.A. member recently, it never dawned upon me that I could actually get a more effective job done on the farm. The idea as prescribed called for an organization of in-school farm boys, divided into as many segments as needed to cover the homes of boys that live in the school community.

The functions of these groups are as follows: (1) To visit each agricultural boy in a given vicinity and establish what you may call a *mortgage* on the dangerous hazards that occur on the farm. (2) The groups and its leader, under my supervision, will make what you may call an *installment plan* on correcting these hazards. (3) The group leader will send notices to each boy that has been visited as to the deadline of his first installment. (4) After sending out notices the group, still under my supervision, will revisit each boy to ascertain what he has done in correcting the prevailing hazardous conditions and report back to the organization.

Some of the hazardous situations that prevail with my in-school boys are: (1) Naked electrical wires; (2) Broken risers in steps; (3) Leaving wheeled farm equipment and tractors in a position where they can readily be released by children; (4) Carelessly dropping old boards that are saturated with nails; (5) Failing to put dangerous hand equipment and tools in the proper places; etc.

It is my sincere feeling that every instructor of vocational agriculture should do his part to reduce the injuries and hardships that result from

(Continued on page 263)

HELPS FOR EVALUATING PROGRAMS OF ADULT EDUCATION IN VOCATIONAL AGRICULTURE by W. P. Schroeder, pp. 27, published by Bureau of Research and Service, School of Education, Michigan State University, East Lansing. Price, 25c for single copies.

This bulletin is based on a study of adult education in 352 schools in nine north-central states. It includes checklists of items for the clientele served, flexibility of schedule, methods of instruction, coordination of the adult program, cooperation, and results. Scales are provided for comparing the individual school with those included in the study. The last part of the bulletin consists of a discussion of evaluation practices used including such items as persons assisting with evaluation, time and place of evaluation, types of things evaluated, and methods of getting evidence. Teachers of vocational agriculture should find this bulletin very helpful.

—A.H.K.

ORGANIZING, CONDUCTING AND EVALUATING, ADULT FARMER COURSES by H. M. Byram, H. W. Kitts, and L. J. Phipps., pp. 42, published by the Bureau of Research and Service, College of Education, Michigan State College, East Lansing. Price, 60c for single copies.

This bulletin is the outgrowth of a cooperative study of the adult education section of the Central Regional Research Conference for workers in the field of agricultural education. The study consists of teacher ratings of the value of the practices they used in organizing, conducting, and evaluating their adult farmer courses. The practices included in the study were grouped under the following headings: Administration and Policy, Public Relations, Planning a Program, Organizing Class Groups, Planning the Instruction, Scheduling and Locating Courses, Conducting Classes, Conducting On-Farm Instruction, Financing, Providing Teachers and Teacher Time, Supervising Special Teachers, Evaluating, and Social Activities and Special Features.

The lists of practices alone should make this bulletin of great interest to teachers of vocational agriculture.

—A.H.K.

PROFITABLE SHEEP by S. B. Collins, illustrated, pp. 310, published by the Macmillan Co., New York. Price: $5.25.

Profitable Sheep contains chapters on Entering the Business; Pre-Breeding and Breeding Management of Ewes; The Care of Pregnant Ewes; Equipment for Lambing; The Lambing Barn and Its Use; Lambing Time; Growing the Lambs; Health Control for Growing Lambs—Marking—Pest Control—Weaning; Growing Wool, Shearing, and Marketing Wool; Sheep Psychology—Handling Sheep; Prevention and Treatment of Disease and Other Sheep Troubles.

The book is well written and well illustrated. The early chapters appear to present a rather realistic appraisal of the sheep business. Throughout, the authors have done a commendable job of presenting and describing practices to be followed in sheep production through a complete year of activities. The emphasis is on range feeding and management of commercial ewes producing market lambs and wool. The "how to do" is stressed just as much as the "what should be done." It should be noted that little or nothing is included on the subject of improving through breeding or selection. Teachers of vocational agriculture in areas where sheep production is important should find this book very useful.

S. B. Collins is Sheep Specialist, California State Polytechnic College, San Luis Obispo, California.

—A.H.K.

FARM SHOP SKILLS IN MECHANIZED AGRICULTURE by Sampson, Mowery, and Kugler, illustrated, pp. 395, published by American Technical Society, Chicago. Price (retail), $4.95.

The chapters included in this publication are The Farm Shop, Woodworking with Hand Tools, Woodworking with Power Tools, Painting of Farm Buildings and Equipment, Concrete and Concrete Masonry Construction, Soldering and Pipe Fitting, Metal Working on the Farm, Welding Practices on the Farm, Fitting Shop and Farm Tools, Using Electricity on the Farm, Maintaining Farm Machinery, and Farm Shop Projects.

This is basically a "how to do" book with the exception of the first and last chapters. The main feature of the book is the use of over 400 illustrations of various items and skills with the legends carrying the details of the various steps involved in doing the job illustrated. The first chapter includes farm shop plans and tool lists; the last chapter contains a few plans for farm shop projects. The illustrations are clear and well selected; the writing style is readable but quite brief in relation to any particular topic. This brevity is probably a result of the "illustration-legend" method of presentation. This book should prove very useful as a reference for the farm shop phases of the vocational agriculture program.

Harry O. Sampson was formerly State Director and vocational agriculture teacher trainer in New Jersey.

Albert S. Mowery is with the Douglass Fir Plywood Association of Pennsylvania and formerly a Professor of Agriculture, Pennsylvania State College.

Harold L. Kugler is Professor of Agricultural Engineering, Kansas State College.

—A.H.K.

Do Students' Farming Programs Lead to - - -

(Continued from page 246)

are included in the farming program.

11. A large number of supplementary farm practices is included in the farming program.
12. A considerable number of farm mechanics activities is included in the farming program.
13. A large number of soil conservation activities is included in the farming program.

The following criteria were *not* significantly related to establishment in farming:

1. Cash crop or livestock enterprises are included in the farming program.
2. A large number of improvement enterprises is included in the farming program.

Application of the Study

It is because all of the in-school farming program components and characteristics individually, and the standard scores when added together into a total score for each student, were found to be associated with establishment in farming, that the criteria are recommended as a teaching-learning aid.

The teacher of vocational agriculture, using the set of criteria, can assist the beginning student and his parents to understand the philosophy and procedures in the development of a supervised farming program leading to establishment in farming.

The criteria may be used by the teacher of vocational agriculture for individual and group instruction since they provide opportunities to learn the necessary skills and the ability to make managerial decisions in the operation of the in-school farming program.

The student of vocational agriculture may use the criteria in planning a farming program which will lead to establishment in farming.

The criteria may be used by the student of vocational agriculture in periodically evaluating his in-school farming program to determine his progress.

Teachers of vocational agriculture may use the criteria to determine and correct areas of weakness in the in-school farming programs of their students. □

Tips That Work - - -

(Continued from page 262)

farm accidents. After receiving this idea, I believe that I have a solution to my problem that is instructional, educational, practical, and, most of all, applicable in my local situation.

Idea came from:
Calvin Crandall
Weiser, Idaho

Submitted by:
Warren Nicholas
Culpeper, Virginia

□

Stories in pictures

Clark W. Davis of Wilmington, Delaware, has been elected chairman of the Sponsoring Committee for the Future Farmers of America Foundation, Inc. He succeeds A. F. Davis of Cleveland, Ohio. As chairman of the Sponsoring Committee he will be responsible for soliciting funds for the Foundation's award program during the coming year.

Mr. Davis is General Manager of the Grasselli Chemicals Department, E. I. duPont deNemours & Company. His election came at the close of the recent joint meeting of donors and the FFA Foundation Board of Trustees. Representatives of 90 organizations and business and industrial concerns attended the session which was held January 27 in the Department of Health, Education, and Welfare Building at Washington, D. C. He is being greeted in the picture by Dan Dunham, National FFA President, of Lakeview, Oregon.

Delaware FFA members assemble for State Judging Contests. The contests are held each year at the University of Delaware. Teachers are shown assisting with grouping and assignments of contestants. The judging includes dairy cattle, milk, livestock, seeds and hay, land, meat, vegetables, poultry and tractor driving.

The state public speaking and parliamentary procedure contests are held the same day. The business meeting of the convention is held a week later when winners of the judging contests are announced. In Delaware no one has to travel more than 97 miles to attend these contests—most come less than 65 miles.

—(Picture supplied by Paul M. Hodgson.)

Farm Comes to School—Farming has been added as an extra subject to the curri of Lingfield Secondary School (roughly the equivalent of an American high sc Surrey, England. It has become so popular with the students that many of them d their spare time and vacations to it. 15-year-old Ann Ackroyd, head girl (elected b student body) of Lingfield Secondary School, talks tractors with other membe the student body who, like her, want to become farmers. The number of girls w would indicate that British farms may expect a feminine invasion in a few

—(Photo supplied by the British Information Service

Receiving some expert advice on how to dress a chicken are members of the Freshman Vocational Agriculture classes at Madera, Calif., Union High School. Gus Sambueso, owner and operator of Gus' Food Lockers in Madera, is demonstrating to Future Farmer members (left to right) Joe Howard, Mike Allred, Ronald Smith, Richard Dolio, and Mike Holm, the proper way to go about cleaning a chicken prior to the boys preparing some 180 birds in preparation for this year's Parent and Son Banquet.

Each year, according to Jack Evans, Head of the Agriculture Department at Madera, Gus makes the facilities of his plant available to the local Future Farmer Chapter for instructional purposes when the time comes for the Freshman Broiler Project to be completed.

The Freshmen Agriculture students are required to raise the chickens for the banquet and must keep accurate records of feed consumption, weight gained and dressing percentage of the birds. Each Freshman class starts out with 100 birds and then competes to see which class does the best job of over-all managing their project.

Follow-up instruction is given in regard to proper methods in killing, scalding, removal of feathers by machine, and preparation of the birds for the barbecue pits. The classes are required to present a written report to the regularly scheduled FFA meetings every other week and must follow out the instructions given to them by their agriculture teachers and older FFA members. The Future Farmer Chapter incurred all expenses, unless poor management practices have been followed and then the Freshman classes would have to bear any losses due to negligence on their part.

Joe Cretin, cadet teacher, and Dino Petrucci, agricultural instructor, have worked closely with the boys in carrying out this year's Freshman Broiler project.

Last year in Iowa, Vocational Agriculture classes managed 867 corn demonst plots. These plots included tests under field conditions to determine the obtained from various strains of hybrid seed and from various fertilizer treat Members of the Jefferson FFA Chapter are shown using a cyclometer in ord determine the exact acreage in their plot.

A research project in Iowa has disclosed that 120 young farmers who had s Vocational Agriculture in a sampling of 10 high schools are using improved pra in crop production and soil management to a greater extent than 120 young fa from 10 similar communities which did not offer Vocational Agriculture. Former tional Agriculture graduates were using the improved practices to a greater than graduates from the control schools in 28 of 41 improved practices investi The higher scores of the former students of Vocational Agriculture were statis significant in 6 of the practices.

—(Picture supplied by John B. McClellan